

**RHODE ISLAND STANDARD DETAILS  
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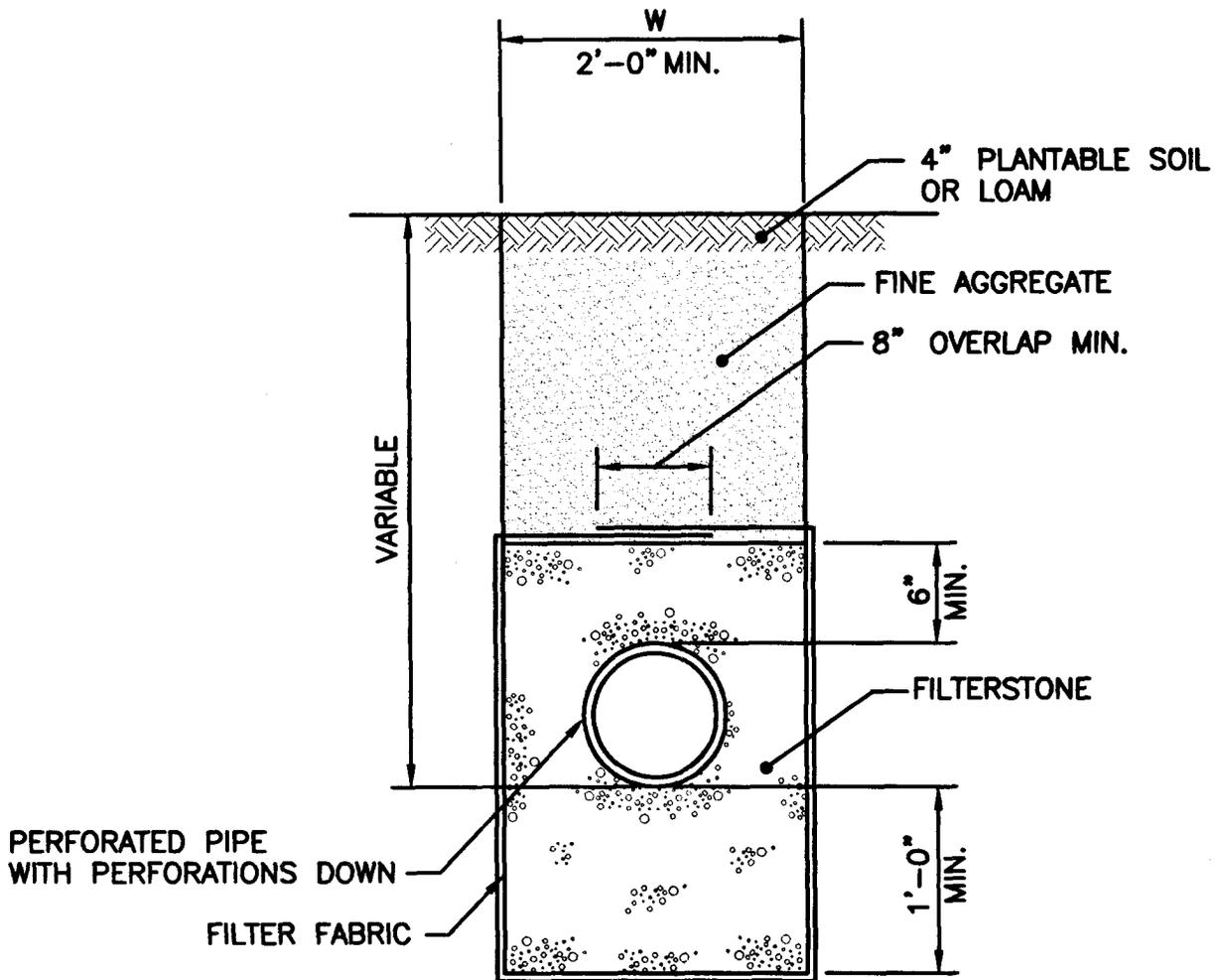
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**NOTES:**

1. SHALL BE IN ACCORDANCE WITH SECTION 703 OF THE R.I. STANDARD SPECIFICATIONS.
2. WIDTH (W) OF TRENCH = INSIDE DIAMETER OF PIPE + 1'-0" OR 2'-0" WHICH EVER IS GREATER.
3. MINIMUM PIPE DIAMETER 8".
4. DISTANCE DIMENSIONS ARE GIVEN TO THE OUTSIDE DIAMETER OF PIPE.

**RHODE ISLAND DEPARTMENT OF TRANSPORTATION**

REVISIONS		
NO.	BY	DATE

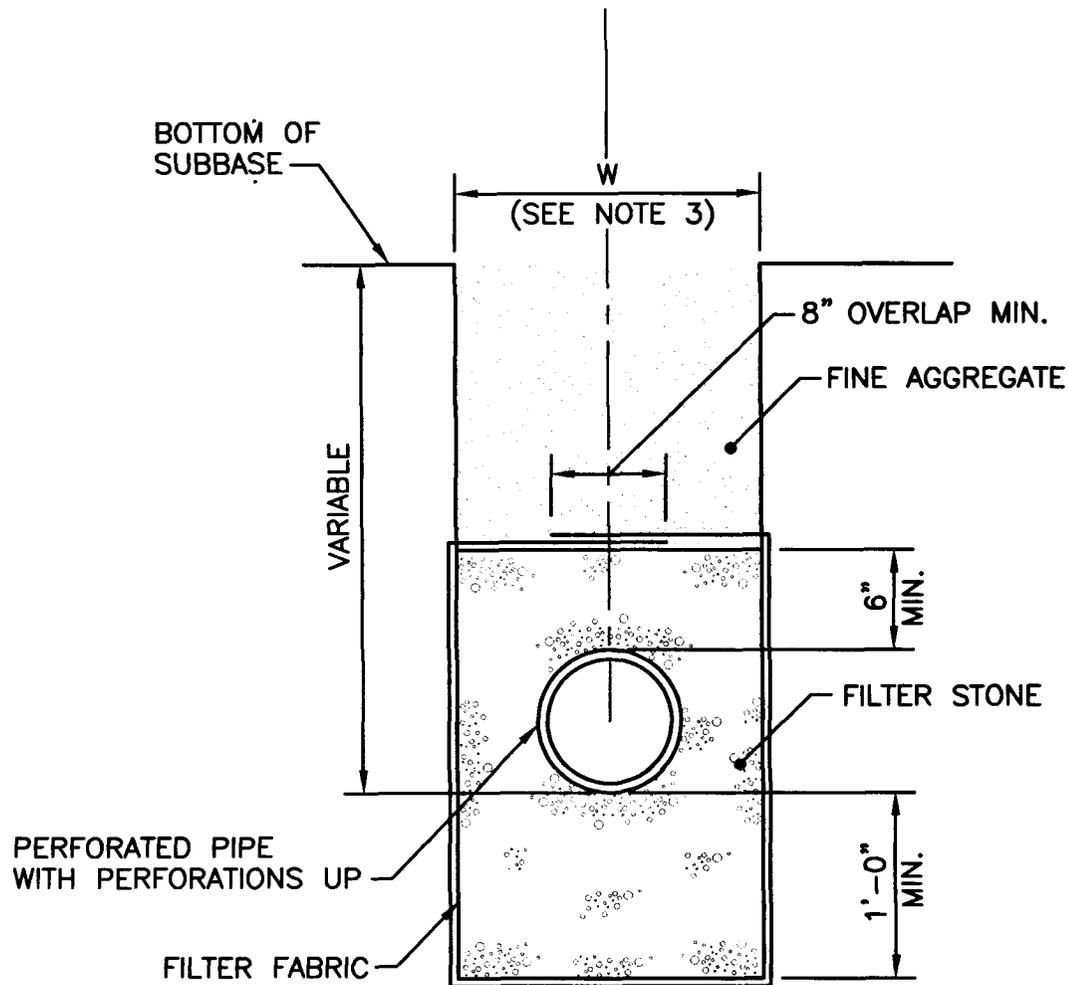
**UNDERDRAIN**

*James H. Caselli*  
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*Edward J. Perkins Jr.*  
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 TRANSPORTATION

JUNE 15, 1998  
 ISSUE DATE





**NOTES:**

1. SHALL BE IN ACCORDANCE WITH SECTION 703 OF THE R.I. STANDARD SPECIFICATIONS.
2. MINIMUM PIPE DIAMETER 1'-0".
3. TRENCH WIDTHS: PIPE  $\leq$  36" = O.D. + 24" EACH SIDE  
 PIPE  $>$  36" = O.D. + 30" EACH SIDE
4. DISTANCE DIMENSIONS ARE GIVEN TO THE OUTSIDE DIAMETER OF PIPE.
5. SEE CONSTRUCTION PLANS FOR LOCATION.

**RHODE ISLAND DEPARTMENT OF TRANSPORTATION**

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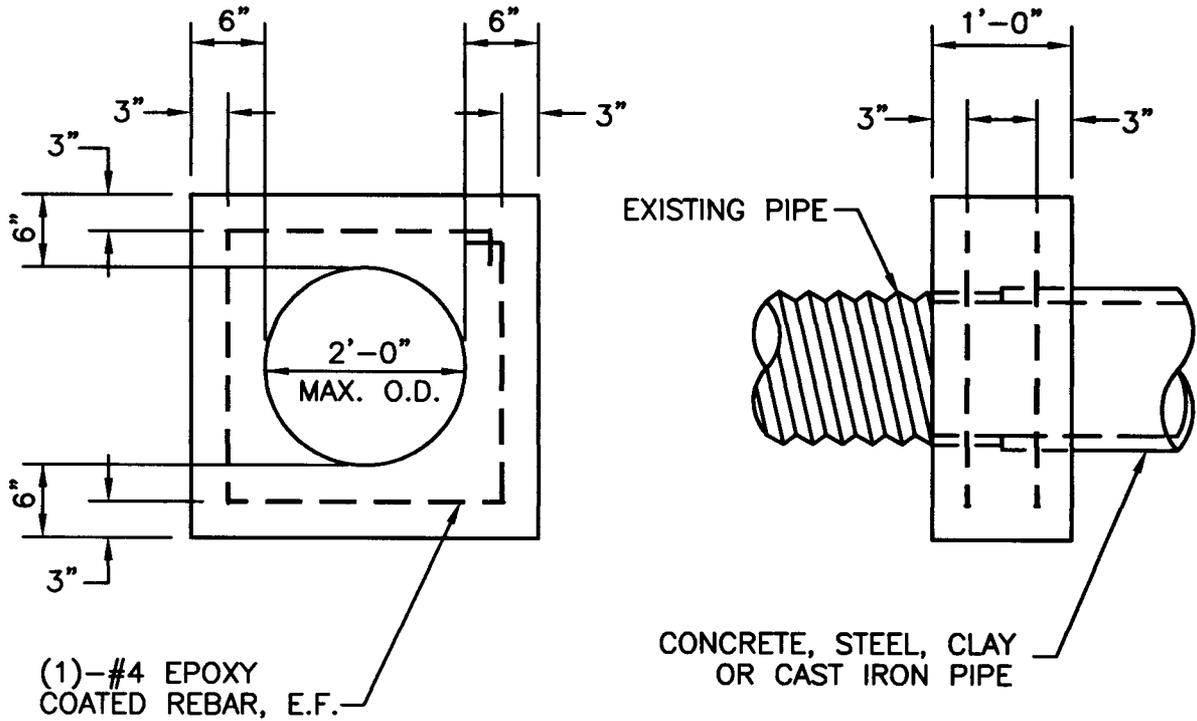
**COMBINATION DRAIN**

*James H. Capaldi*  
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*Edmund J. Parker Jr*  
 CHIEF DESIGN ENGINEER  
 TRANSPORTATION

JUNE 15, 1998  
 ISSUE DATE





**NOTES:**

1. SHALL BE IN ACCORDANCE WITH SECTION 709 OF THE R.I. STANDARD SPECIFICATIONS.
2. MAXIMUM PIPE DIAMETER FOR USE OF CONNECTING COLLAR IS 2'-0".
3. PIPE WITH LARGEST OUTSIDE DIAMETER USED TO DETERMINE SIZE OF COLLAR.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

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CONCRETE CONNECTING COLLAR

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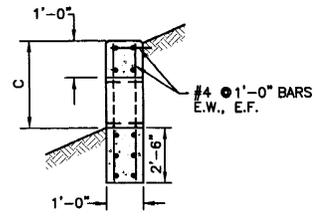
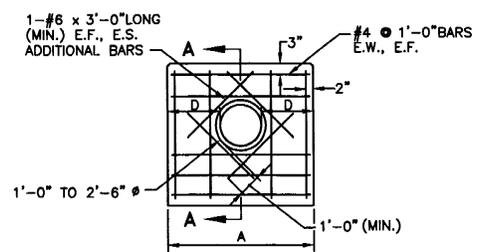
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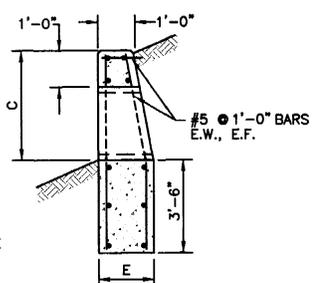
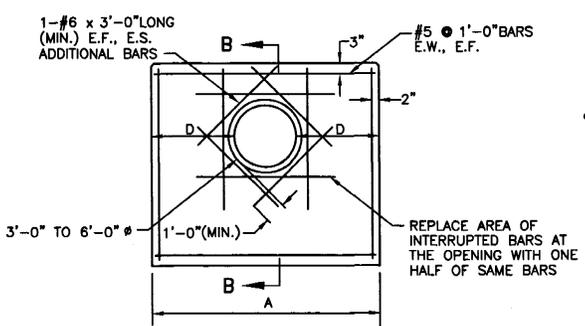
RHODE ISLAND DEPARTMENT OF TRANSPORTATION  
CONCRETE HEADWALLS FOR PIPE CULVERTS

*Edward P. Gault*  
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DEPARTMENT OF TRANSPORTATION



SECTION A-A



SECTION B-B

DIAMETER OF PIPE	A	C	D	E	CU. FT. CONCRETE
1'-0"	3'-0"	2'-2"	1'-0"	-	13.2
1'-3"	3'-9"	2'-5"	1'-3"	-	17.2
1'-6"	4'-6"	2'-8"	1'-6"	-	21.5
1'-9"	5'-3"	2'-11"	1'-9"	-	26.0
2'-0"	6'-0"	3'-2"	2'-0"	-	30.9
2'-3"	6'-9"	3'-6"	2'-3"	-	36.5
2'-6"	7'-6"	3'-9"	2'-6"	-	42.0
3'-0"	9'-6"	4'-0"	3'-3"	1'-5"	84.1
3'-6"	11'-0"	4'-6"	3'-9"	1'-7"	111.8
4'-0"	12'-8"	5'-0"	4'-4"	1'-9"	146.5
4'-6"	14'-4"	5'-6"	4'-11"	1'-11"	186.3
5'-0"	16'-0"	6'-0"	5'-6"	2'-1"	232.6
5'-6"	17'-8"	6'-6"	6'-1"	2'-3"	284.9
6'-0"	19'-4"	7'-0"	6'-8"	2'-5"	343.6

- NOTES:
1. SHALL BE IN ACCORDANCE WITH SECTION 709 OF THE R.I. STANDARD SPECIFICATIONS.
  2. 3/4" CHAMFER ON ALL EXPOSED EDGES.
  3. 1'-0" COMPACTED GRAVEL UNDER HEADWALL.
  4. ALL REINFORCING BARS SHALL BE EPOXY COATED.

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RHODE ISLAND DEPARTMENT OF TRANSPORTATION

STANDARD HEADWALLS FOR MULTIPLE  
3'-6" TO 7'-0" PIPE CULVERTS

CHIEF ENGINEER  
TRANSPORTATION  
*James T. Condit*

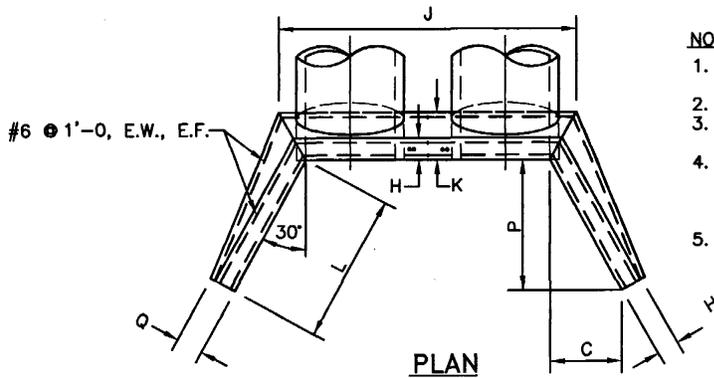
CHIEF DESIGN ENGINEER  
TRANSPORTATION  
*Edward M. Kelly*

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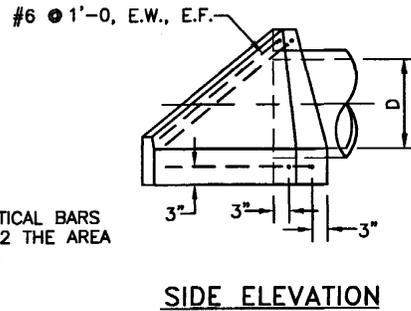
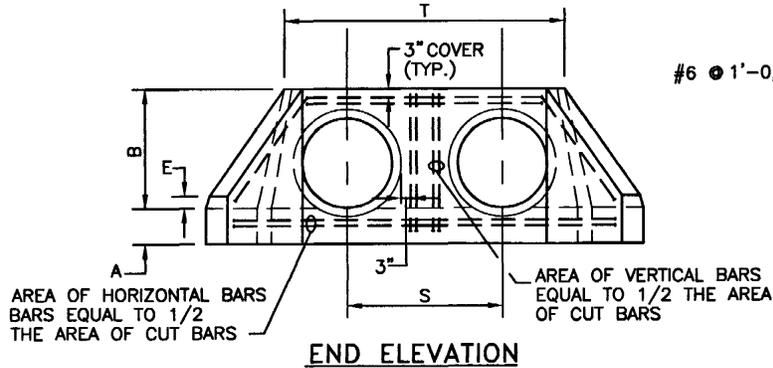
TABLE OF DIMENSIONS AND CONCRETE VOLUMES PER HEADWALL FOR 3'-6" TO 7'-0" CIRCULAR PIPE CULVERTS									
		DIAMETER OF PIPE CULVERTS							
		3'-6"	4'-0"	4'-6"	5'-0"	5'-6"	6'-0"	6'-6"	7'-0"
FOR 1 1/2:1 FILL SLOPE	A	1'-6"	1'-6"	1'-6"	1'-6"	1'-6"	1'-6"	1'-6"	1'-6"
	B	4'-4"	4'-10"	5'-4"	5'-10"	6'-4"	6'-10"	7'-4"	7'-10"
	C	3'-3 3/4"	3'-9"	4'-2 1/4"	4'-7"	5'-0 5/8"	5'-5 3/4"	5'-11"	6'-4 1/4"
	D	3'-6"	4'-0"	4'-6"	5'-0"	5'-6"	6'-0"	6'-6"	7'-0"
	E	0'-6"	0'-6"	0'-6"	0'-6"	0'-6"	0'-6"	0'-6"	0'-6"
	H	0'-10"	0'-10"	0'-11"	1'-0"	1'-1"	1'-2"	1'-3"	1'-4"
	J	11'-8 1/2"	13'-2 1/4"	14'-9 1/4"	16'-4"	17'-11"	19'-6"	21'-0 3/4"	22'-7 5/8"
	K	1'-11"	2'-0 1/2"	2'-3"	2'-5 1/2"	2'-8"	2'-10 1/2"	3'-1"	3'-3 1/2"
	L	6'-7 5/8"	7'-6"	8'-4 1/2"	9'-2 7/8"	10'-1 1/4"	10'-11 5/8"	11'-10"	12'-8 3/8"
	P	5'-9"	6'-6"	7'-3"	8'-0"	8'-9"	9'-6"	10'-3"	11'-0"
Q	0'-11 1/2"	0'-11 1/2"	1'-0 1/2"	1'-1 1/2"	1'-2 1/2"	1'-3 1/2"	1'-4 1/2"	1'-5 1/2"	
CU. YD. CONC.	CONC. PIPE	3.6	4.4	5.7	7.1	8.8	10.8	12.9	15.4
	C.M. PIPE	3.8	4.7	6.1	7.7	9.5	11.7	14.4	16.7
FOR 2:1 FILL SLOPE	C	4'-4"	4'-10 7/8"	5'-5 3/4"	6'-0 3/4"	6'-7 5/8"	7'-2 5/8"	7'-9 1/2"	8'-4 1/2"
	J	11'-8 1/4"	13'-2"	14'-9"	16'-3 3/4"	17'-10 3/4"	19'-5 1/2"	21'-0 1/2"	22'-7 1/8"
	L	8'-0"	9'-9 3/4"	10'-11 5/8"	12'-1 1/2"	13'-3 3/8"	14'-5 1/4"	15'-7"	16'-9"
	P	7'-6"	8'-6"	9'-6"	10'-6"	11'-6"	12'-6"	13'-6"	14'-6"
CU. YD. CONC.	CONC. PIPE	4.3	5.3	6.8	8.6	10.7	13.0	15.7	18.7
	C.M. PIPE	4.5	5.6	7.2	9.1	11.4	13.9	16.8	20.0

NOTE:  
FOR ALL DIMENSIONS NOT SHOWN, SEE VALUES LISTED ABOVE FOR 1 1/2:1 FILL SLOPE



**NOTES:**

1. SHALL BE IN ACCORDANCE WITH SECTION 709 OF THE STANDARD SPECIFICATIONS.
2. QUANTITIES GIVEN ARE FOR ONE ENDWALL.
3. FOR DIMENSIONS NOT GIVEN IN TABLE, SEE SHEET 2 OF 2.
4. ON SHALLOW FILLS, WHERE ENDWALLS ARE 1'-0" OR LESS BELOW SHOULDER LINE, THE TOP OF THE ENDWALL SHALL BE CONSTRUCTED PARALLEL TO THE GRADE OF THE ROAD.
5. ALL REINFORCING BARS SHALL BE EPOXY COATED.



FOR CORRUGATED METAL PIPE						
DIAMETER OF PIPE	S	T	FILL SLOPE 1 1/2:1		FILL SLOPE 2:1	
			CU. YD. CONCRETE ONE DOUBLE ENDWALL	INCREASE CU. YD. FOR EACH ADDITIONAL PIPE	CU. YD. CONCRETE ONE DOUBLE ENDWALL	INCREASE CU. YD. FOR EACH ADDITIONAL PIPE
3'-6"	5'-3 1/2"	8'-9 1/2"	5.1	1.3	5.8	1.3
4'-0"	6'-0 1/2"	10'-0 1/2"	6.3	1.7	7.2	1.4
4'-6"	6'-9 1/2"	11'-3 1/2"	8.3	2.1	8.4	2.1
5'-0"	7'-6 1/2"	12'-6 1/2"	10.4	2.7	11.8	2.4
5'-6"	8'-3 1/2"	13'-9 1/2"	12.8	3.3	14.6	3.9
6'-0"	9'-0 1/2"	16'-0 1/2"	16.7	4.1	17.9	4.1
6'-6"	9'-9 1/2"	16'-3 1/2"	19.0	5.0	21.7	4.9
7'-0"	10'-6 1/2"	17'-6 1/2"	22.8	6.0	26.0	5.1

FOR CONCRETE PIPE						
DIAMETER OF PIPE	S	T	FILL SLOPE 1 1/2:1		FILL SLOPE 2:1	
			CU. YD. CONCRETE ONE DOUBLE ENDWALL	INCREASE CU. YD. FOR EACH ADDITIONAL PIPE	CU. YD. CONCRETE ONE DOUBLE ENDWALL	INCREASE CU. YD. FOR EACH ADDITIONAL PIPE
3'-6"	6'-0"	9'-6"	4.1	1.3	5.5	1.3
4'-0"	6'-10"	10'-10"	6.0	1.6	6.9	1.6
4'-6"	7'-0"	12'-2"	7.7	2.1	8.8	2.1
5'-0"	8'-6"	13'-6"	9.7	2.6	11.2	2.6
5'-6"	9'-4"	14'-10"	12.1	3.3	13.9	3.3
6'-0"	10'-2"	16'-2"	14.7	4.0	16.9	4.0
6'-6"	11'-0"	17'-6"	17.7	4.8	20.4	4.8
7'-0"	11'-10"	18'-10"	21.2	5.7	24.4	5.7

SHEET 1 OF 2

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

STANDARD HEADWALLS FOR MULTIPLE  
3'-6" TO 7'-0" PIPE CULVERTS

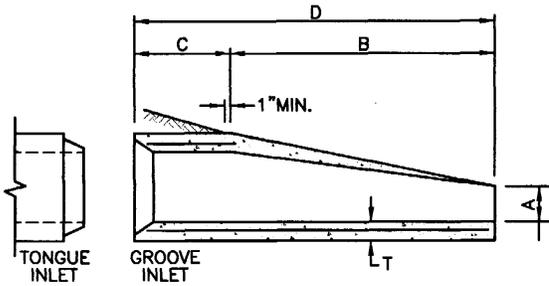
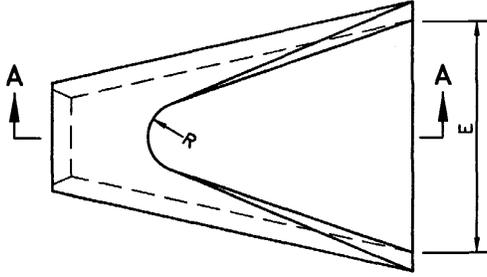
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NO.	BY	DATE

*James R. Gagliardi*  
CHIEF ENGINEER  
TRANSPORTATION

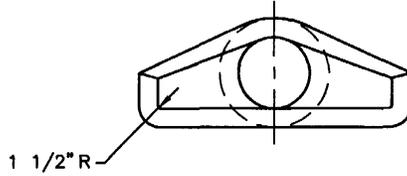
*Edward J. Roberts*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

JUNE 15, 1998  
ISSUE DATE





**SECTION A-A**



**END ELEVATION**

DIMENSIONS								REINFORCEMENT
DIA.	A	B	C	D	E	R	T	ONE LAYER REINFORCEMENT IN CENTER OF WALL
								MIN. AREA OF EACH WAY (SQ. IN./FT.)
1'-0"	4"	2'-0"	4'-0 7/8"	6'-0 7/8"	2'-0"	9"	2"	0.048
1'-3"	6"	2'-3"	3'-10"	6'-1"	2'-6"	11"	2 1/4"	0.054
1'-6"	9"	2'-3"	3'-10"	6'-1"	3'-0"	12"	2 1/2"	0.060
2'-0"	9 1/2"	3'-7 1/2"	2'-6"	6'-1 1/2"	4'-0"	1'-2"	3"	0.072
2'-6"	1'-0"	4'-6"	1'-7 3/4"	6'-1 3/4"	5'-0"	1'-3"	3 1/2"	0.084
3'-0"	1'-3"	5'-3"	2'-10 3/4"	8'-1 3/4"	6'-0"	1'-8"	4"	0.096
3'-6"	1'-9"	5'-3"	2'-11"	8'-2"	6'-6"	1'-10"	4 1/2"	0.108
4'-0"	2'-0"	6'-0"	2'-2"	8'-2"	7'-0"	1'-10"	5"	0.120
4'-6"	2'-3"	5'-5"	2'-11"	8'-4"	7'-6"	2'-0"	5 1/2"	0.132
5'-0"	2'-6"	5'-0"	3'-3"	8'-3"	8'-0"	2'-0"	6"	0.144

**NOTE:**  
SHALL BE IN ACCORDANCE WITH SECTION 701 OF THE R.I. STANDARD SPECIFICATIONS.

**RHODE ISLAND DEPARTMENT OF TRANSPORTATION**

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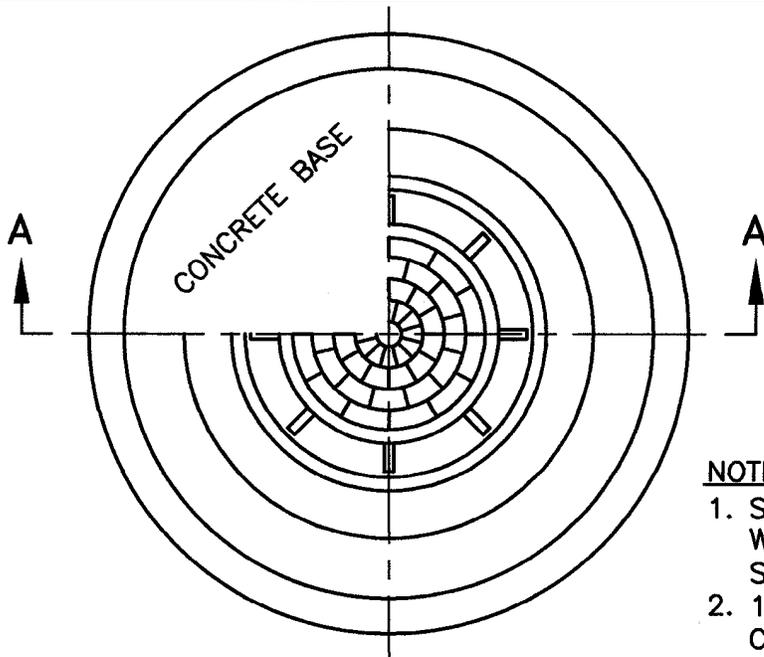
**PRECAST CONCRETE FLARED END SECTION**

*James K. Capaldi*  
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*Edward J. Parker Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

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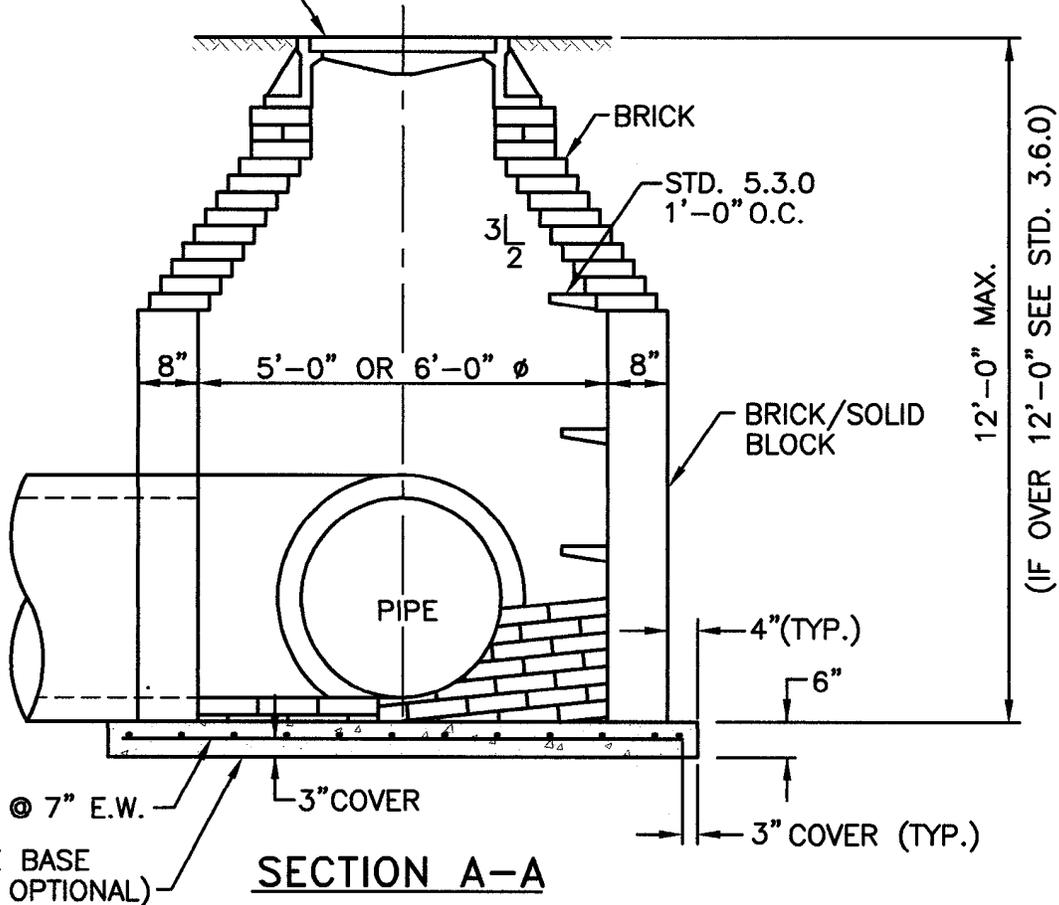
CONCRETE BASE

**PLAN**

**NOTES:**

1. SHALL BE IN ACCORDANCE WITH SECTION 702 OF THE R.I. STANDARD SPECIFICATIONS.
2. 1/2" CEMENT MORTAR PLASTER COAT REQUIRED ON ALL INSIDE AND OUTSIDE SURFACES.
3. REFER TO STD. 5.2.0 FOR MAXIMUM PIPE SIZES.

FRAME AND COVER



**SECTION A-A**

**RHODE ISLAND DEPARTMENT OF TRANSPORTATION**

**BRICK/SOLID BLOCK  
5'-0" OR 6'-0" ROUND MANHOLE**

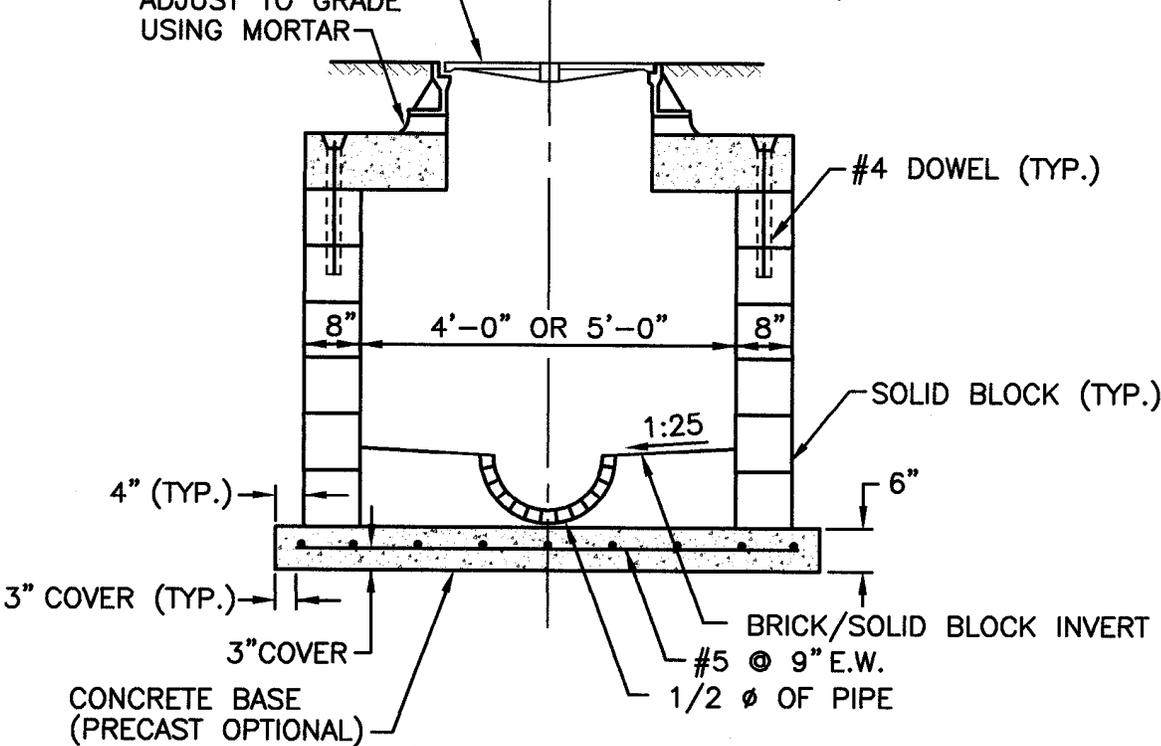
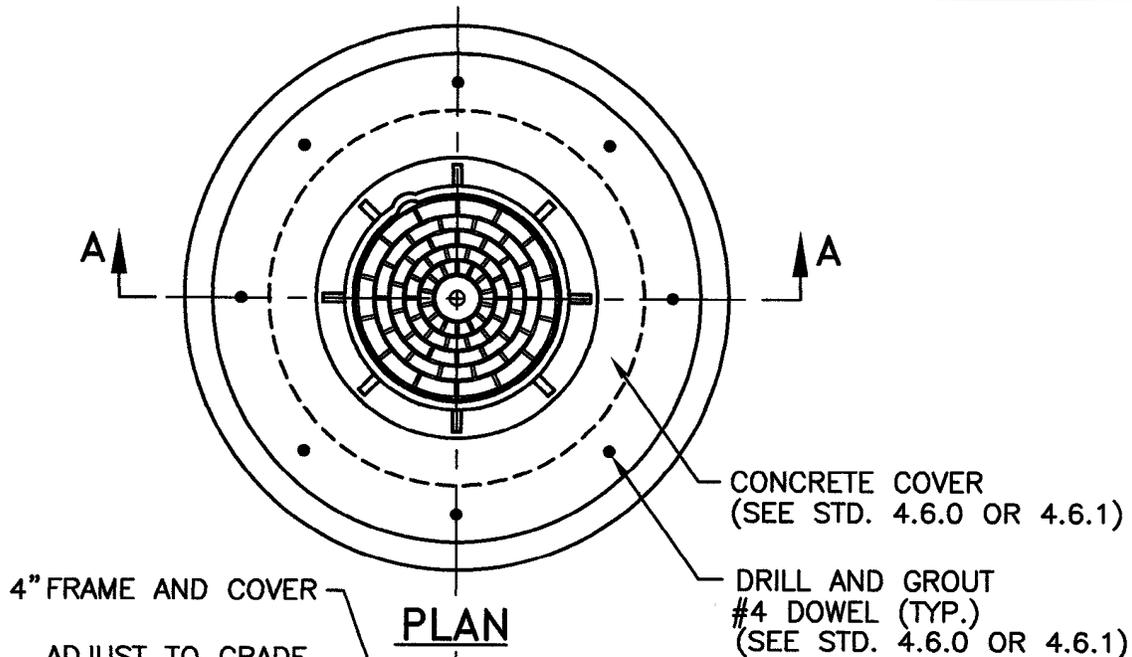
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*James H. Cypariski*  
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*Edmund J. Perkins Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

JUNE 15, 1998  
ISSUE DATE





**SECTION A-A**

**NOTES:**

1. SHALL BE IN ACCORDANCE WITH SECTION 702 OF THE R.I. STANDARD SPECIFICATIONS.
2. 1/2" CEMENT MORTAR PLASTER COAT REQUIRED ON ALL INSIDE AND OUTSIDE SURFACES.
3. ADJUST DOWEL LOCATION BASED ON PIPE CONFIGURATION, AS REQUIRED.
4. PIPE COVER FOR THIS DETAIL SHALL BE 1'-6" TO 3'-0".
5. ALL PIPES SHALL BE SEALED TO MANHOLE ON INSIDE AND OUTSIDE SURFACES.
6. REFER TO STD. 5.2.0 FOR MAXIMUM PIPE SIZES.

**RHODE ISLAND DEPARTMENT OF TRANSPORTATION**

**SOLID BLOCK SHALLOW  
4'-0" OR 5'-0" ROUND MANHOLE**

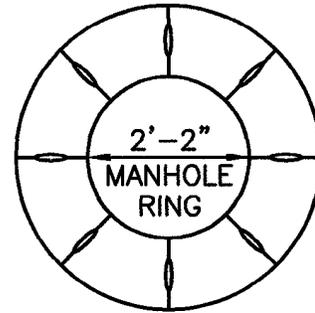
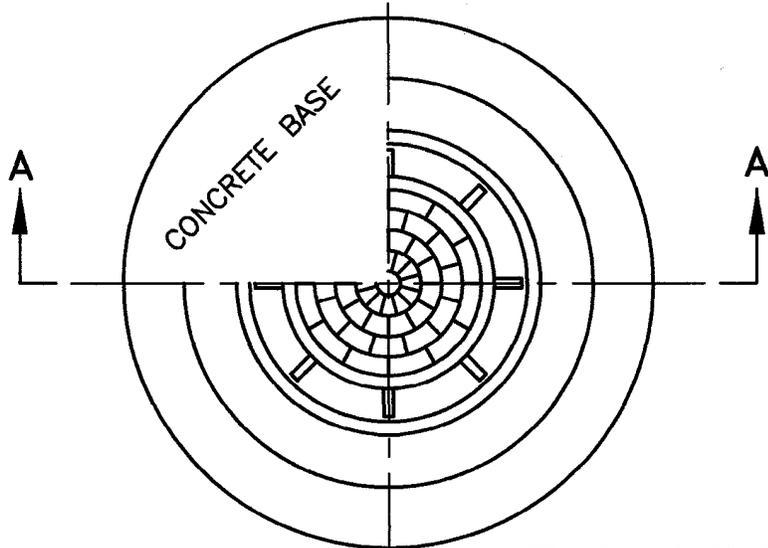
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*James R. Capaldi*  
CHIEF ENGINEER  
TRANSPORTATION

*Edmund J. Parker Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

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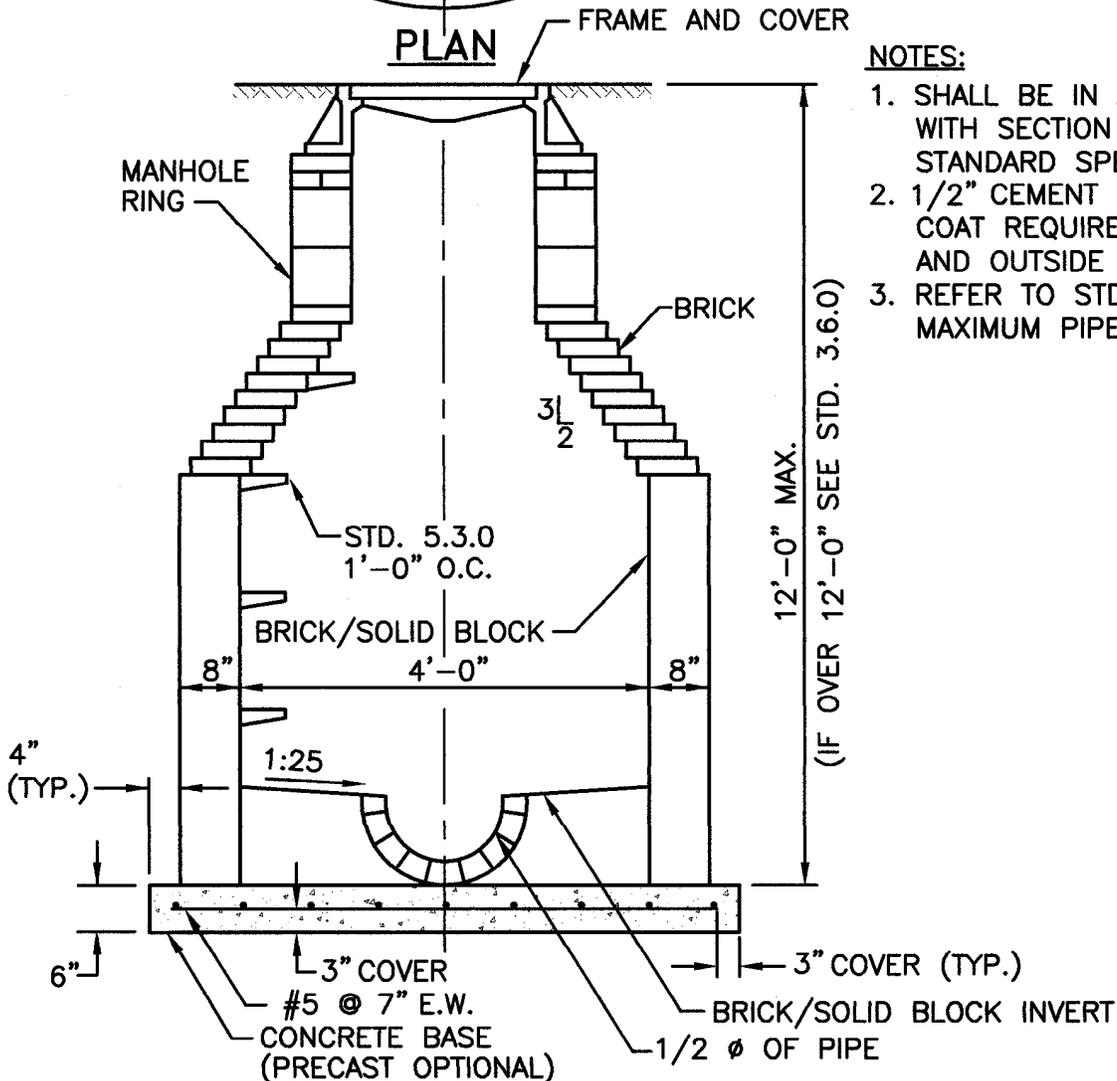




PLAN FRAME AND COVER

NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION 702 OF THE R.I. STANDARD SPECIFICATIONS.
2. 1/2" CEMENT MORTAR PLASTER COAT REQUIRED ON ALL INSIDE AND OUTSIDE SURFACES.
3. REFER TO STD. 5.2.0 FOR MAXIMUM PIPE SIZES.



SECTION A-A

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

BRICK/SOLID BLOCK  
4'-0" ROUND MANHOLE

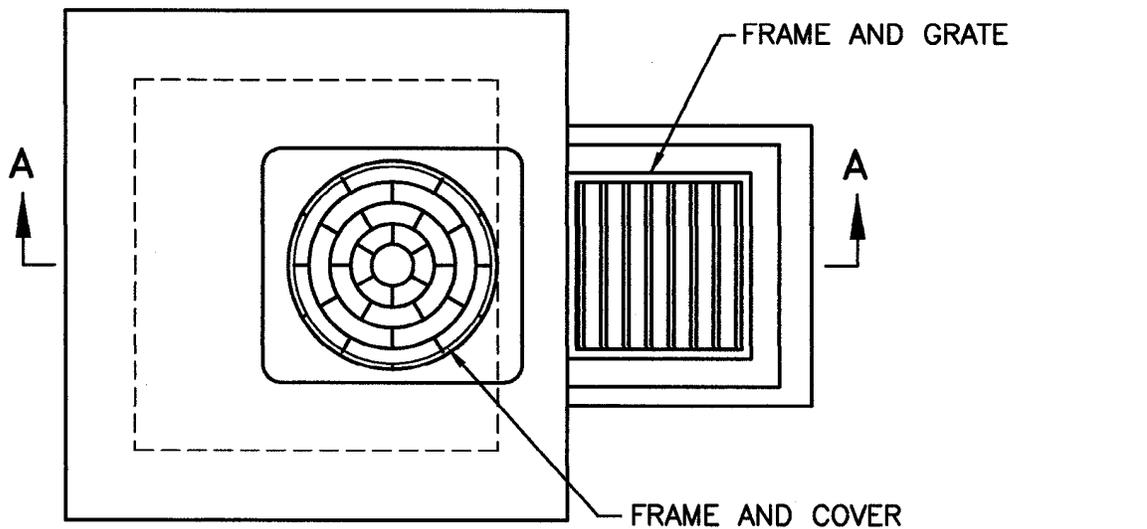
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*James H. Casaldi*  
CHIEF ENGINEER  
TRANSPORTATION

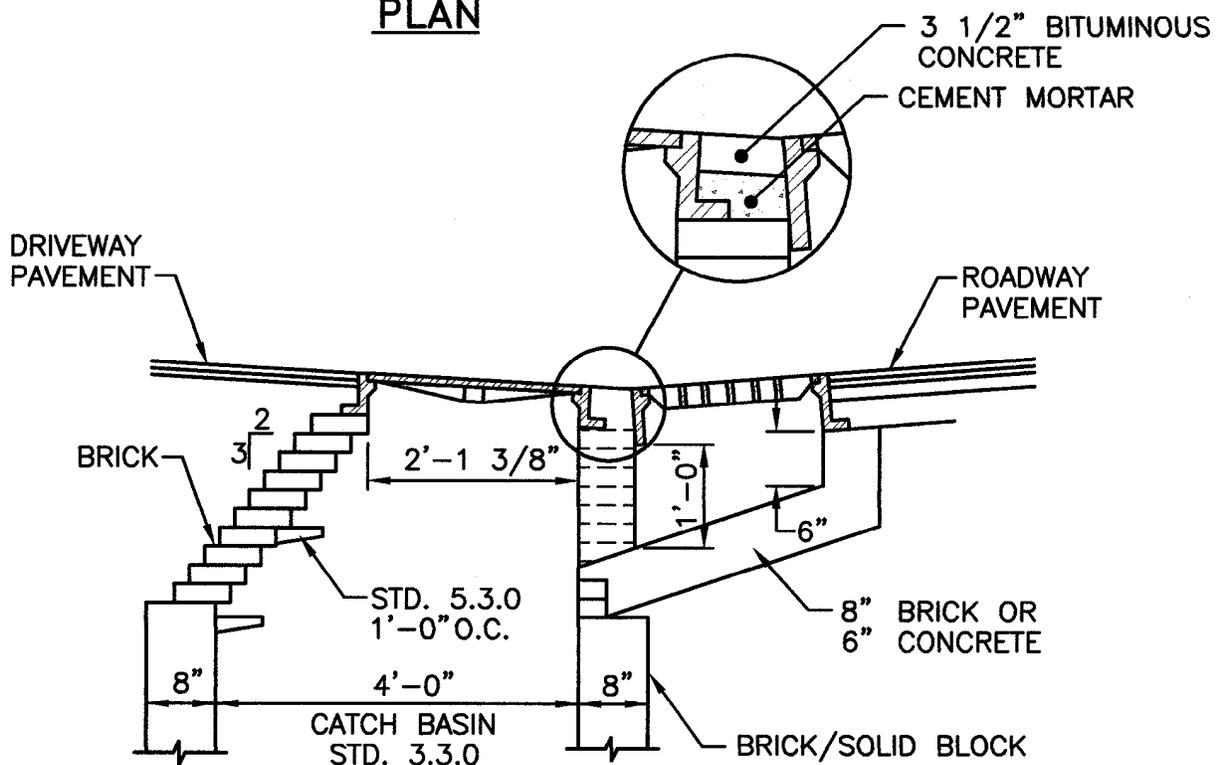
*Edmund J. Parker Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

JUNE 15, 1998  
ISSUE DATE





**PLAN**



**SECTION A-A**

**NOTES:**

1. SHALL BE IN ACCORDANCE WITH SECTION 702 OF THE R.I. STANDARD SPECIFICATIONS.
2. 1/2" CEMENT MORTAR PLASTER REQUIRED ON ALL INSIDE AND OUTSIDE SURFACES.

**RHODE ISLAND DEPARTMENT OF TRANSPORTATION**

**BRICK/SOLID BLOCK  
DRIVEWAY BASIN AND GUTTER INLET**

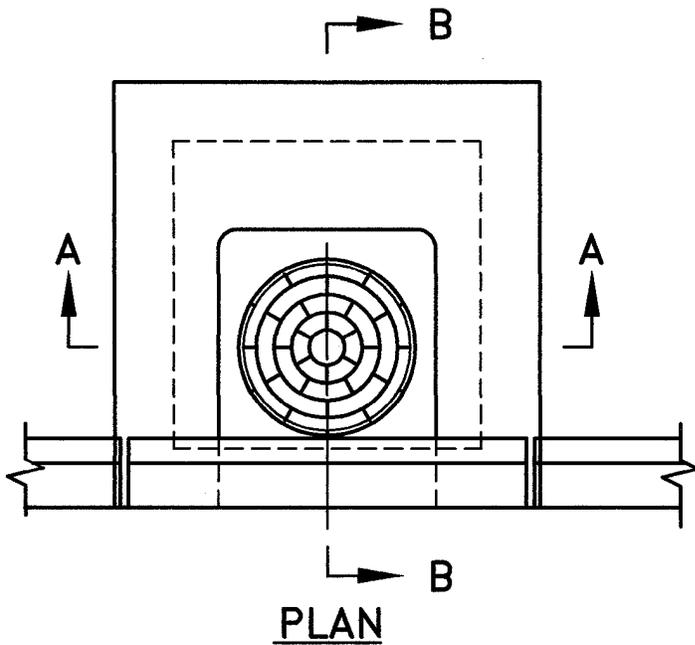
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*Edmund J. Perkins Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

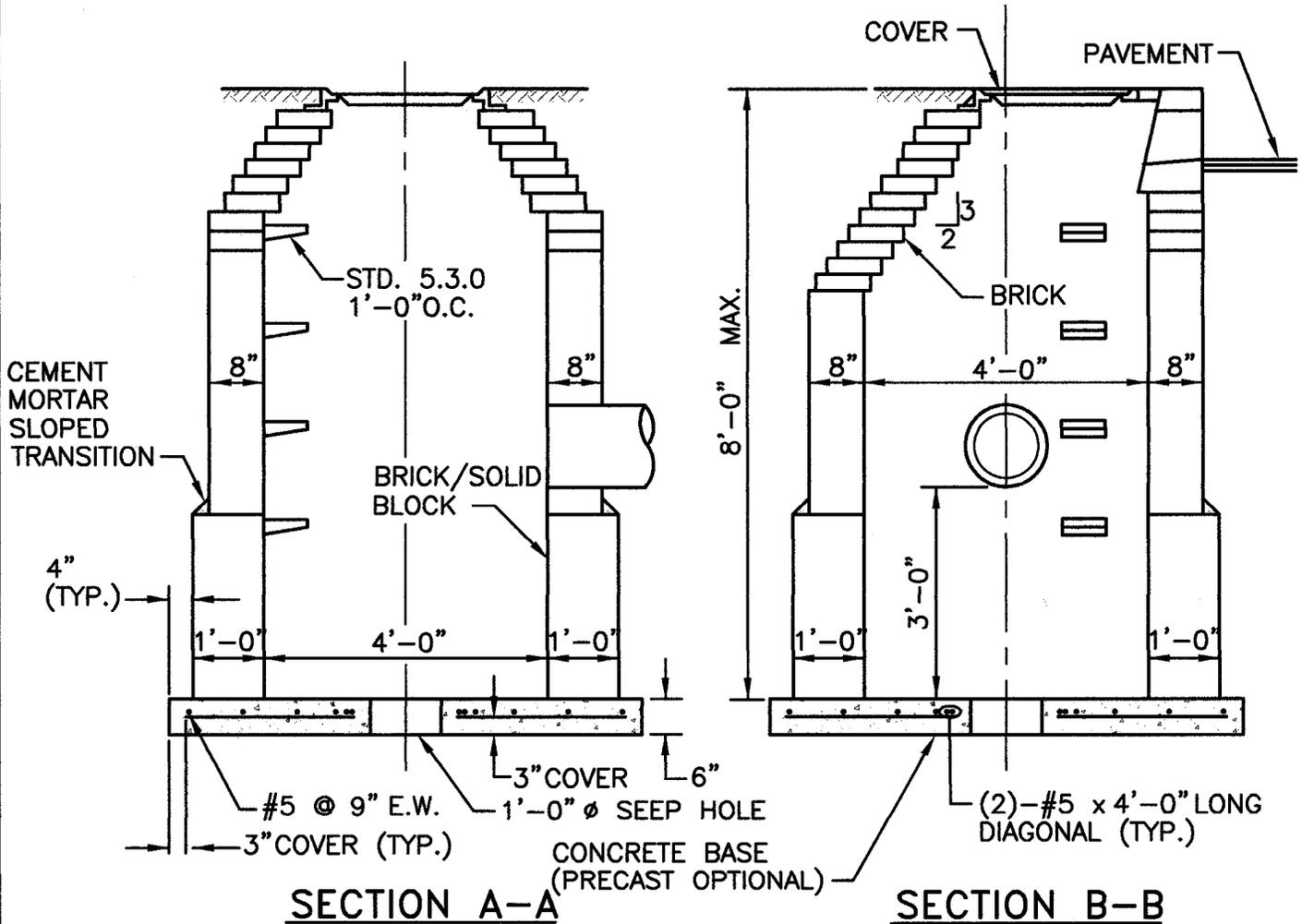
JUNE 15, 1998  
ISSUE DATE





**NOTES:**

1. SHALL BE IN ACCORDANCE WITH SECTION 702 OF THE R.I. STANDARD SPECIFICATIONS.
2. 1/2" CEMENT MORTAR PLASTER REQUIRED ON ALL INSIDE AND OUTSIDE SURFACES.
3. USE 8" WALLS UP TO 6'-0" DEPTH AND 1'-0" WALLS UP TO 8'-0" DEPTH.



**RHODE ISLAND DEPARTMENT OF TRANSPORTATION**

**BRICK/SOLID BLOCK  
TYPE "D" SQUARE CATCH BASIN**

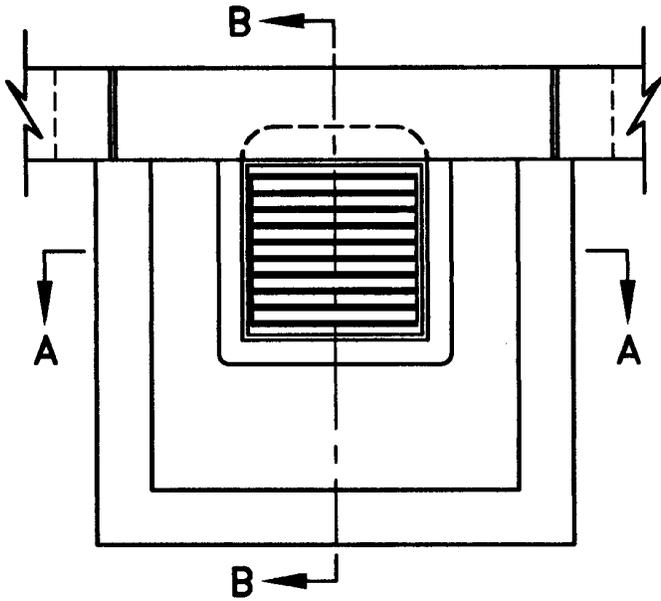
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*James A. Capaldi*  
 CHIEF ENGINEER  
 TRANSPORTATION

*Edmund Parker Jr.*  
 CHIEF DESIGN ENGINEER  
 TRANSPORTATION

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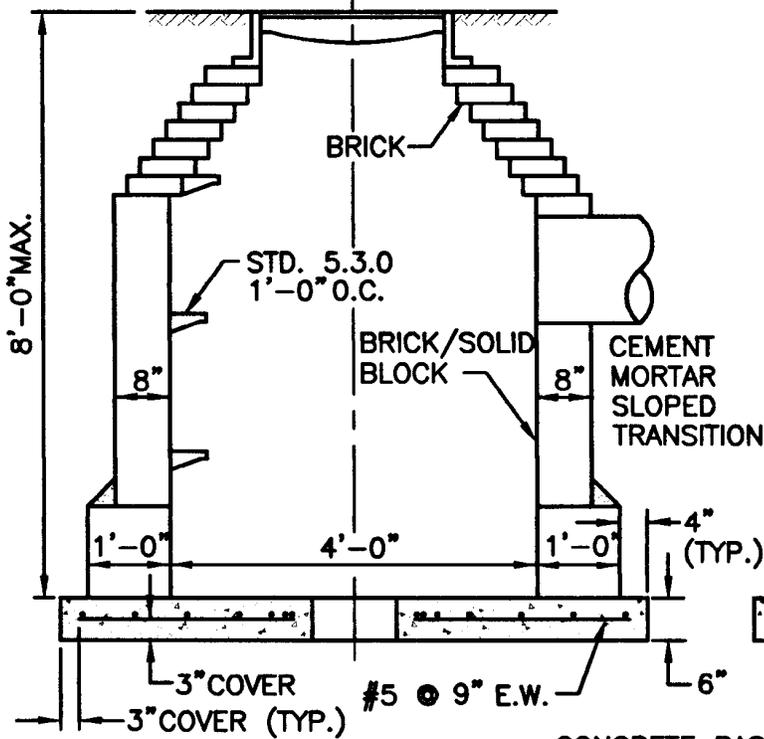




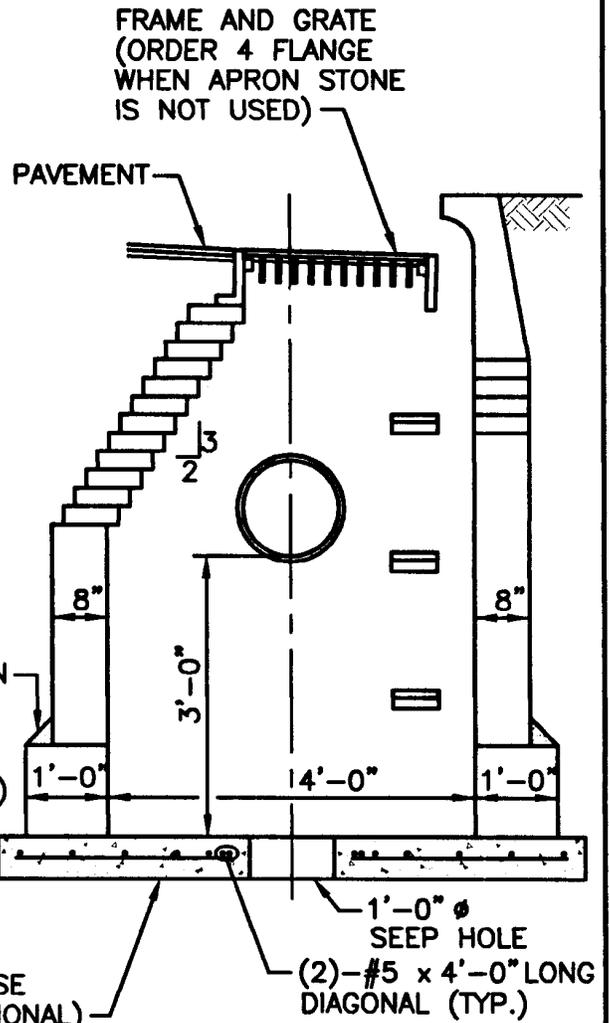
PLAN

**NOTES:**

1. SHALL BE IN ACCORDANCE WITH SECTION 702 OF THE R.I. STANDARD SPECIFICATIONS.
2. 1/2" CEMENT MORTAR PLASTER REQUIRED ON ALL INSIDE AND OUTSIDE SURFACES.
3. USE 8" WALLS TO 6'-0" DEPTH, USE 1'-0" WALLS TO 8'-0" DEPTH.



SECTION A-A



SECTION B-B

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

**BRICK/SOLID BLOCK  
TYPE "F" SQUARE CATCH BASIN**

REVISIONS		
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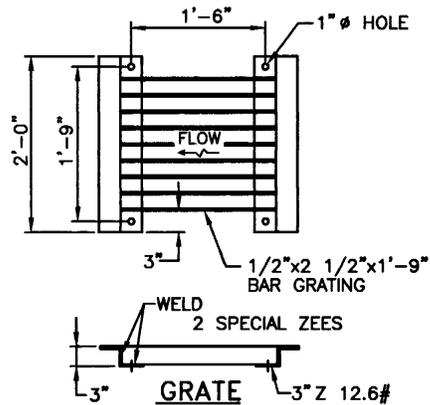
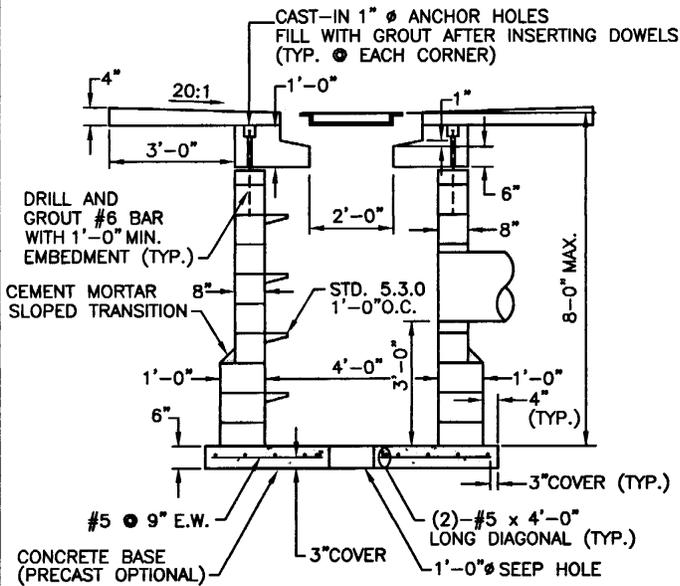
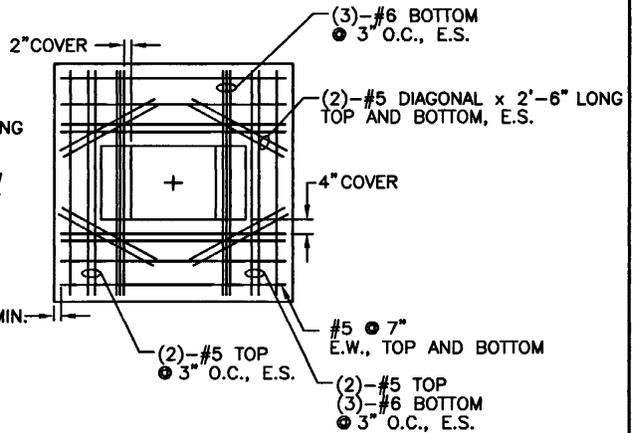
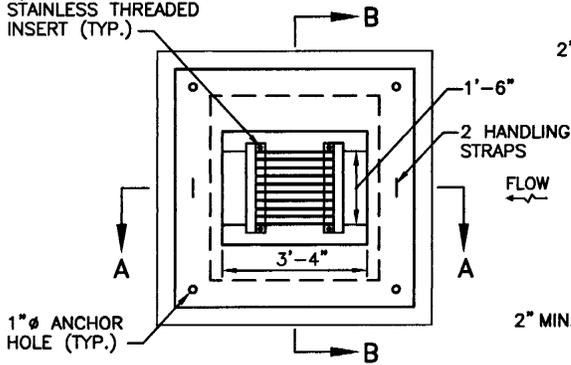
*James H. Cynabli*  
CHIEF ENGINEER  
TRANSPORTATION

*Edward J. Parker Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

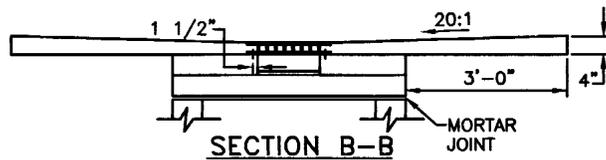
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3/4" Ø GALVANIZED  
STAINLESS THREADED  
INSERT (TYP.)



SECTION A-A



NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION 702 OF THE R.I. STANDARD SPECIFICATIONS.
2. 1/2" CEMENT MORTAR PLASTER COAT REQUIRED ON ALL INSIDE AND OUTSIDE SURFACES.
3. ALL REINFORCING BARS TO BE 5'-0" LONG UNLESS OTHERWISE NOTED.
5. USE 8" WALLS UP TO 6'-0" DEPTH AND 1'-0" WALLS UP TO 8'-0" DEPTH.
6. ALL REINFORCING SHALL BE EPOXY COATED.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

SOLID BLOCK FLUSH SQUARE CATCH BASIN

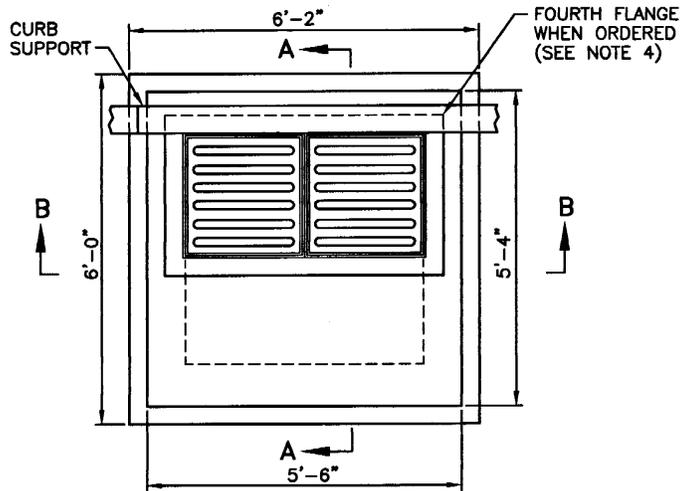
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*James H. Capaldi*  
CHIEF ENGINEER  
TRANSPORTATION

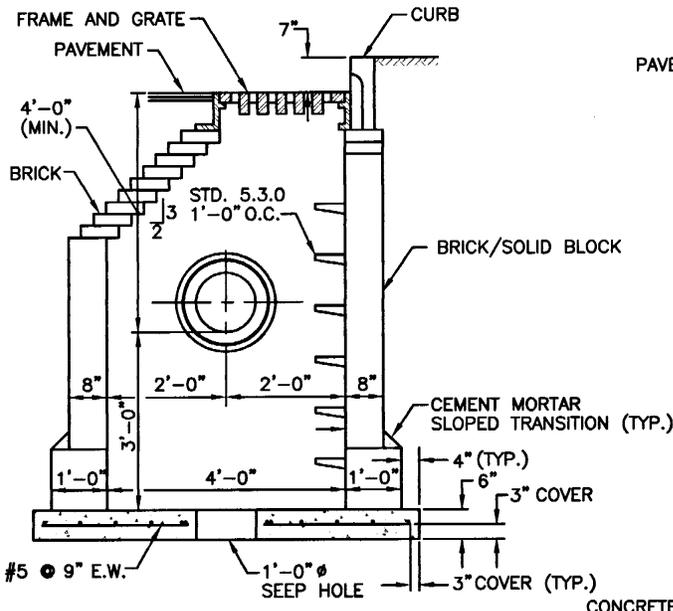
*Edmund Parkes*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

JUNE 15, 1998  
ISSUE DATE

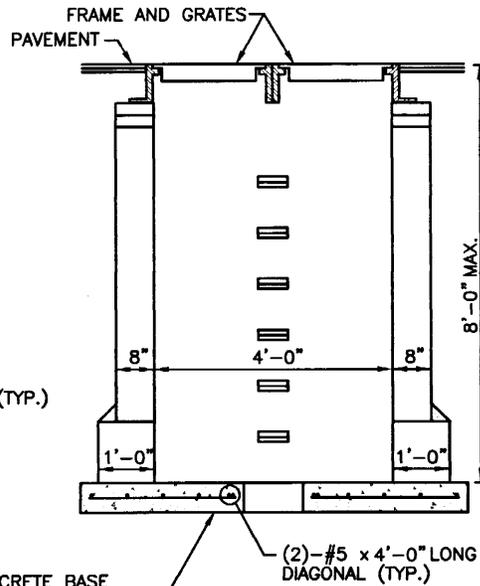




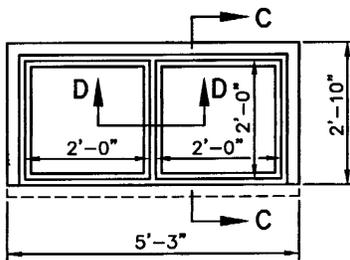
PLAN



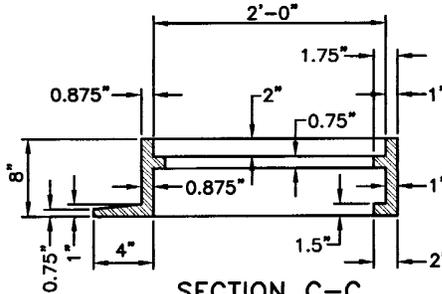
SECTION A-A



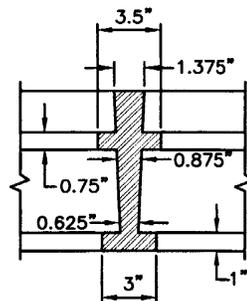
SECTION B-B



FRAME DETAILS



SECTION C-C



SECTION D-D

NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION 702 OF THE R.I. STANDARD SPECIFICATIONS.
2. 1/2" CEMENT MORTAR PLASTER COAT ON ALL INSIDE AND OUTSIDE SURFACES.
3. USE 8" WALLS UP TO 6'-0" DEPTH, AND 1'-0" WALLS UP TO 8'-0" DEPTH.
4. TWO SINGLE FRAMES WITH THREE FLANGES AND TWIN GRATES MAY BE SUBSTITUTED FOR THE DOUBLE FRAME WITH TWIN GRATES.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

BRICK/SOLID BLOCK DOUBLE GRATE CATCH BASIN  
GRATE PARALLEL TO EDGE OF PAVEMENT

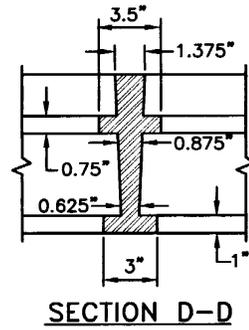
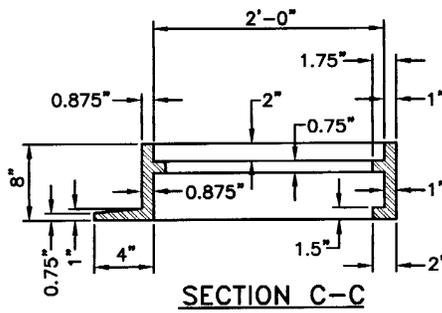
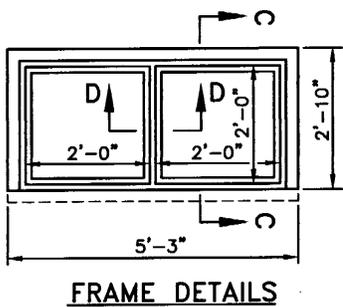
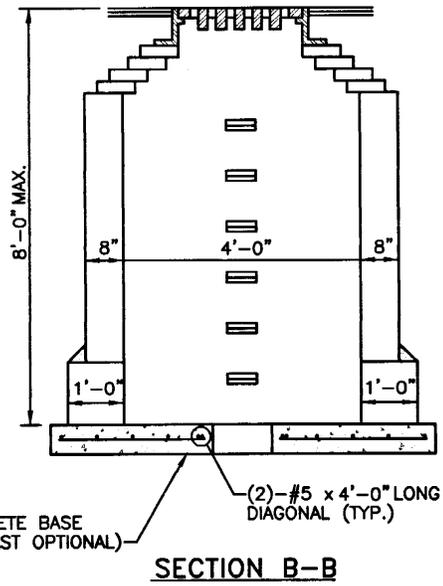
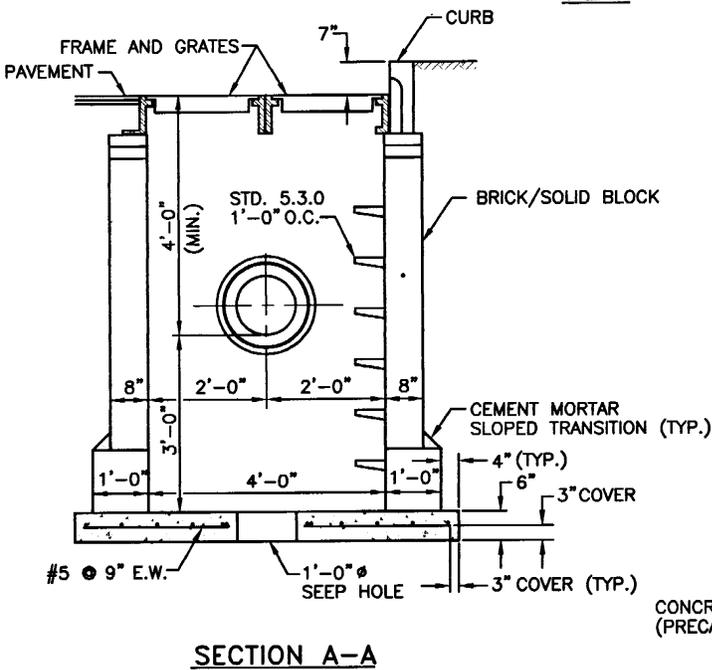
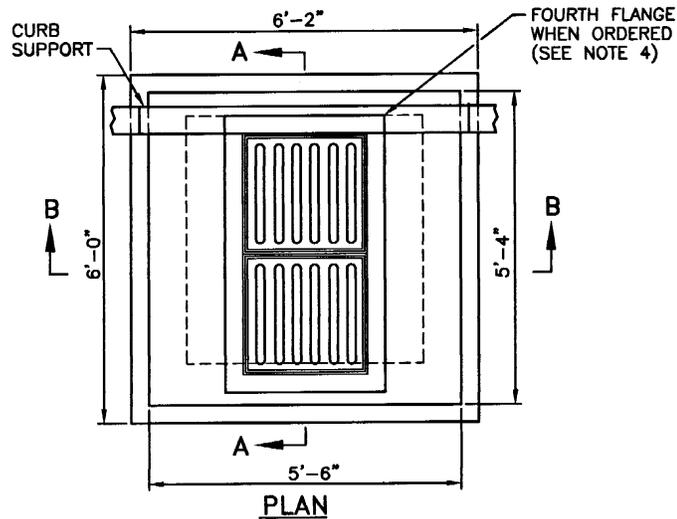
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*James A. Capelli*  
CHIEF ENGINEER  
TRANSPORTATION

*Edward M. Parker*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

JUNE 15, 1998  
ISSUE DATE





**NOTES:**

1. SHALL BE IN ACCORDANCE WITH SECTION 702 OF THE R.I. STANDARD SPECIFICATIONS.
2. 1/2" CEMENT MORTAR PLASTER COAT ON ALL INSIDE AND OUTSIDE SURFACES.
3. USE 8" WALLS UP TO 6'-0" DEPTH, AND 1'-0" WALLS UP TO 8'-0" DEPTH.
4. TWO SINGLE FRAMES WITH THREE FLANGES AND TWIN GRATES MAY BE SUBSTITUTED FOR THE DOUBLE FRAME WITH TWIN GRATES.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

**BRICK/SOLID BLOCK DOUBLE GRATE CATCH BASIN  
GRATE PERPENDICULAR TO EDGE OF PAVEMENT**

REVISIONS		
NO.	BY	DATE

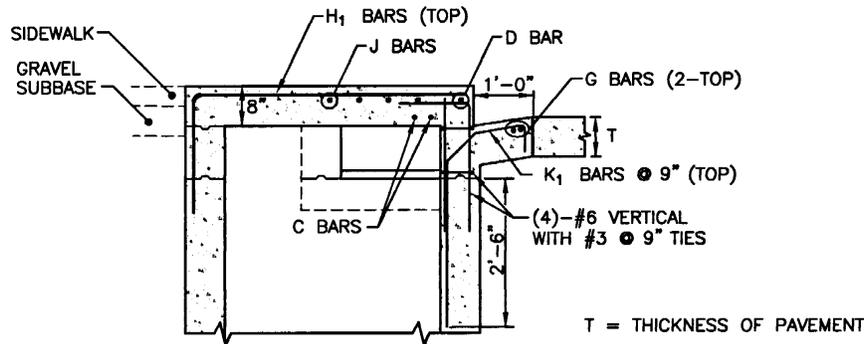
*John A. Gualdi*  
 CHIEF ENGINEER  
 TRANSPORTATION

*Edward P. Roberts*  
 CHIEF DESIGN ENGINEER  
 TRANSPORTATION

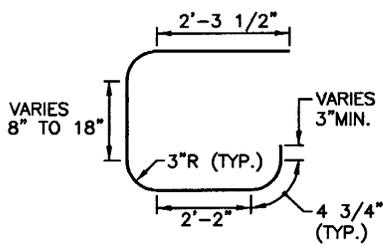
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 ISSUE DATE



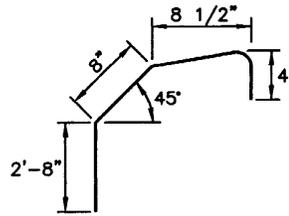




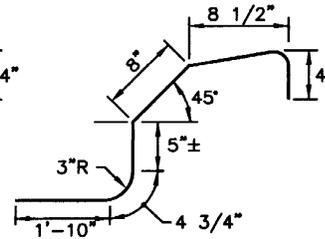
SECTION C-C



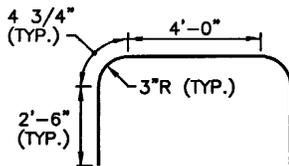
A BARS



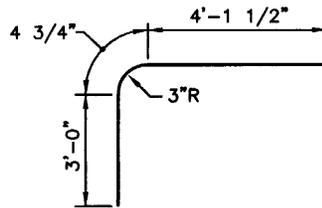
K<sub>1</sub> BARS



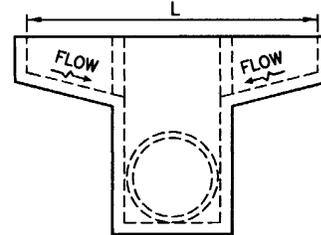
K<sub>2</sub> BARS



J BARS



H<sub>1</sub> BARS



NOTE: SKETCH SHOWS USE OF INLET SAGS. BOTH SIDES TO BE SYMMETRICAL.

**NOTES:**

1. SHALL BE IN ACCORDANCE WITH SECTION 702 OF THE R.I. STANDARD SPECIFICATIONS.
2. 1/4" EXPANSION JOINT NOT NECESSARY WHEN FLEXIBLE PAVEMENT IS USED FOR SIDEWALK OR ROADWAY.
3. THE COVERING FOR ALL REINFORCING STEEL SHALL BE 2", MEASURED FROM THE SURFACE OF THE CONCRETE TO THE FACE OF THE BAR, UNLESS OTHERWISE SHOWN.
4. THE HIGH CAPACITY INLET DETAILED HEREIN IS FOR USE ON A GRADE. IF IT IS TO BE USED IN A SAG, (SEE SKETCH HEREIN), IT SHOULD BE BUILT SYMMETRICALLY ABOUT THE CENTERLINE OF THE PIPE AND LENGTH OF OPENING SPECIFIED.
5. THE TYPE AND SIZE OF PIPE TO BE USED WITH THIS INLET SHALL BE THE TYPE AND SIZE AS CALLED FOR ON THE PLANS.
6. TYPICAL "KEYED" CONSTRUCTION JOINTS ARE SHOWN ON THE DETAILS HEREIN. OTHER "KEYED" OR "DOWELED" TYPE CONSTRUCTION JOINTS MAY BE USED IF ACCEPTABLE TO THE ENGINEER.
7. THE BEARING AREA OF FRAME AND COVER SHALL BE SO FITTED AND FINISHED AS TO PROVIDE A FIRM AND EVEN SEAT FOR THE ENTIRE COVER IN THE FRAME. NO PROJECTIONS SHALL EXIST ON BEARING AREAS OF EITHER CASTING, AND THE COVER SHALL SEAT IN ITS FRAME WITHOUT ROCKING.
8. ALL REINFORCING BARS SHALL BE EPOXY COATED.
9. A SLAB TYPE MANHOLE AND STD. 7.1.0 PRECAST CURB TO BE USED WITH HIGH CAPACITY INLET.
10. THE BELL OR GROOVE OF CONCRETE PIPE CANNOT BE USED INSIDE THE INLET. IT MUST BE CUT OFF.
11. ALL EXPOSED EDGES AT CONSTRUCTION JOINTS SHALL BE BEVELED 3/4".
12. WHEN DEEMED NECESSARY, WEEP HOLES MAY BE INSTALLED IN THE SIDEWALLS OF INLETS DURING CONSTRUCTION TO PROVIDE BASE COURSE DRAINAGE PRIOR TO PLACEMENT OF PAVEMENT. THESE WEEP HOLES SHALL BE LOCATED AT OR BELOW SUBGRADE ELEVATION AS DIRECTED OR APPROVED BY THE ENGINEER TO PROPERLY DRAIN SUBSURFACE MATERIAL.
13. IF HIGH CAPACITY INLET IS TO BE CONSTRUCTED ALONG WITH A SIDEWALK, THE SIDEWALK SHALL BE CONSTRUCTED MONOLITHIC WITH THE TOP SLAB ON THE INLET. THE SIDEWALK SHALL BE REINFORCED WITH WELDED WIRE MESH 6x6-W2.9xW2.9 PLACED 2" BELOW SURFACE OF SIDEWALK AND EXTENDED INTO THE TOP SLAB OF THE INLET A MINIMUM DISTANCE OF 8".
14. BAR SIZES - B BARS, C BARS, D BARS, E BARS, F BARS, G BARS K<sub>1</sub> BARS AND K<sub>2</sub> BARS ARE ALL TO BE #5 BARS. H<sub>1</sub> BARS AND J BARS ARE ALL TO BE #6 BARS. A BARS ARE TO BE #7 BARS.
15. THE COST TO NOTCH THE CURB SHALL BE CONSIDERED INCIDENTAL TO THE COST OF THE CURBING.

SHEET 2 OF 2

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

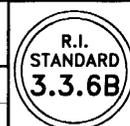
HIGH CAPACITY INLET

REVISIONS		
NO.	BY	DATE

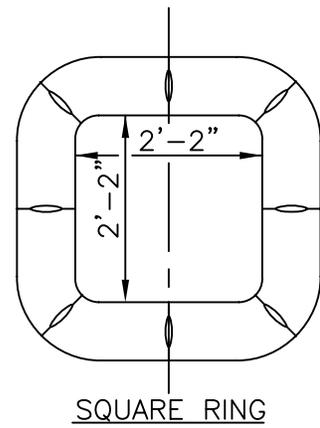
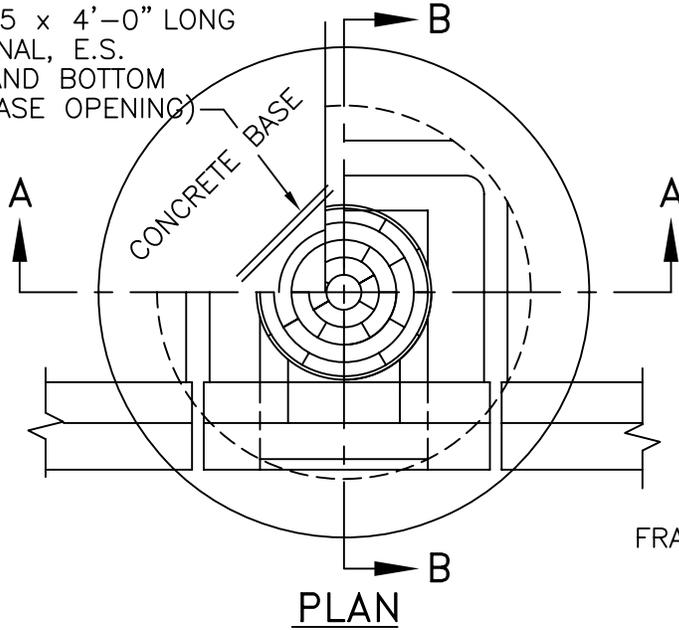
*James R. Capaldi*  
CHIEF ENGINEER  
TRANSPORTATION

*Edward J. Perkins*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

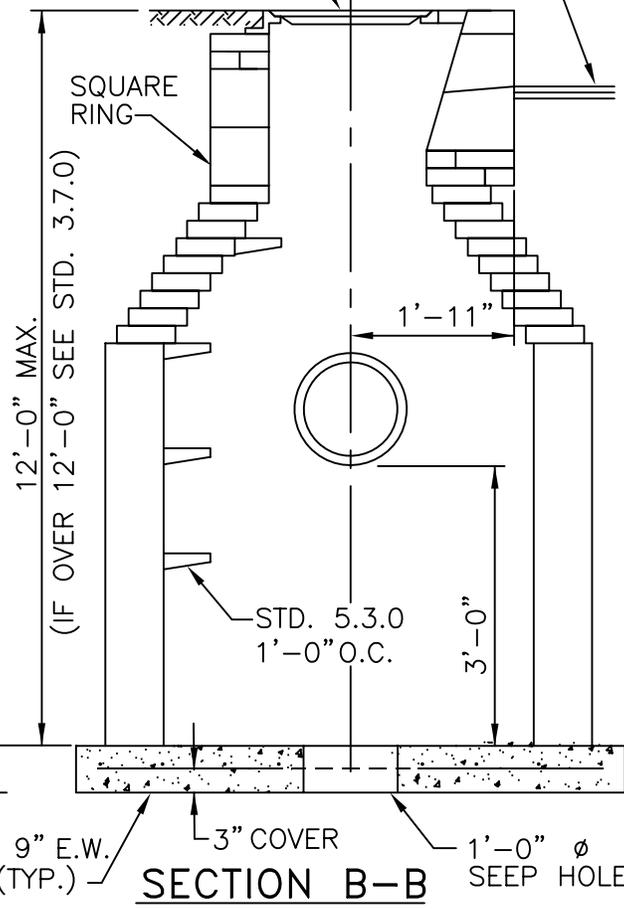
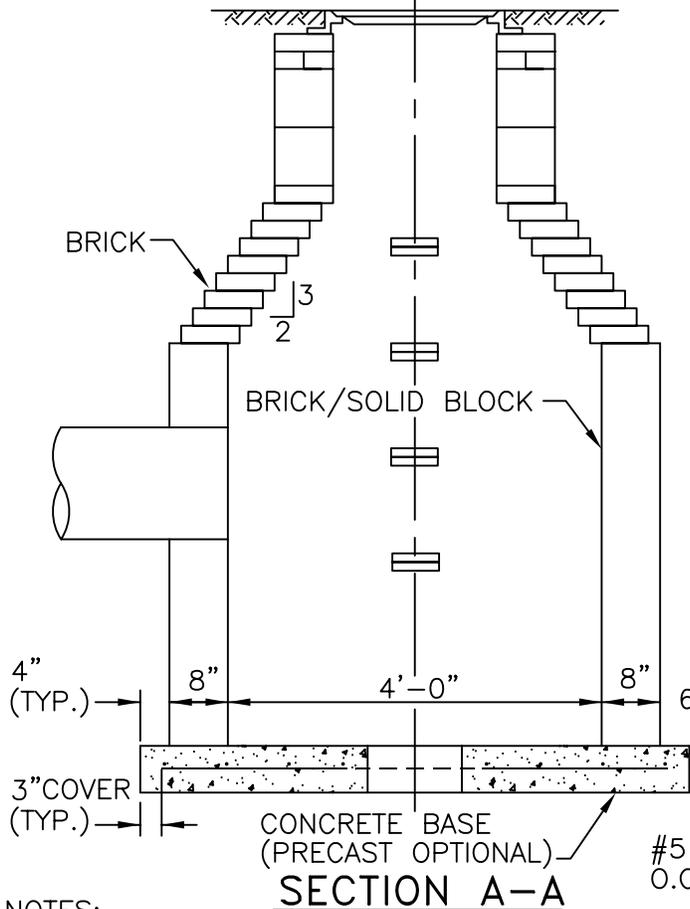
JUNE 15, 1998  
ISSUE DATE



(2)-#5 x 4'-0" LONG  
DIAGONAL, E.S.  
TOP AND BOTTOM  
(AT BASE OPENING)



FRAME AND COVER  
PAVEMENT



**NOTES:**

1. SHALL BE IN ACCORDANCE WITH SECTION 702 OF THE R.I. STANDARD SPECIFICATIONS.
2. 1/2" CEMENT MORTAR PLASTER COAT REQUIRED ON ALL INSIDE AND OUTSIDE SURFACES.
3. REFER TO STD. 5.2.0 FOR MAXIMUM PIPE SIZES.

**RHODE ISLAND DEPARTMENT OF TRANSPORTATION**

REVISIONS		
NO.	BY	DATE
1	MLP	Mar 05

**BRICK/SOLID BLOCK  
TYPE "D" ROUND CATCH BASIN**

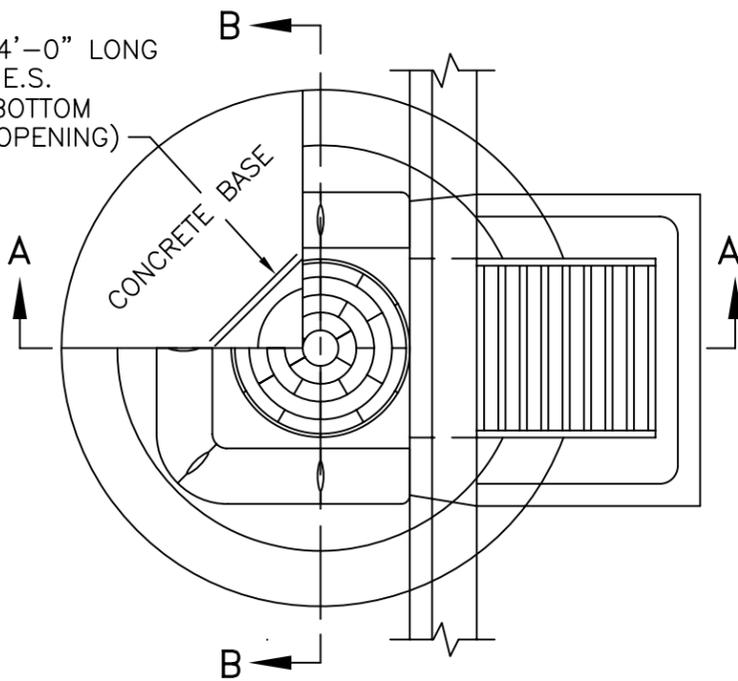
*James A. Casaldi*  
CHIEF ENGINEER  
TRANSPORTATION

*Edmund J. Parker*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

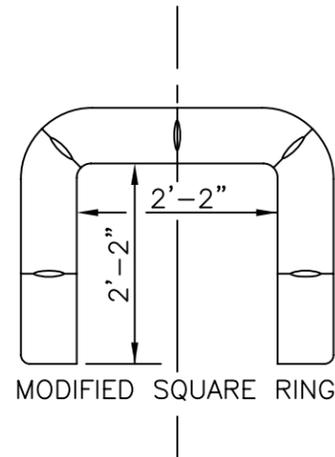
JUNE 15, 1998  
ISSUE DATE



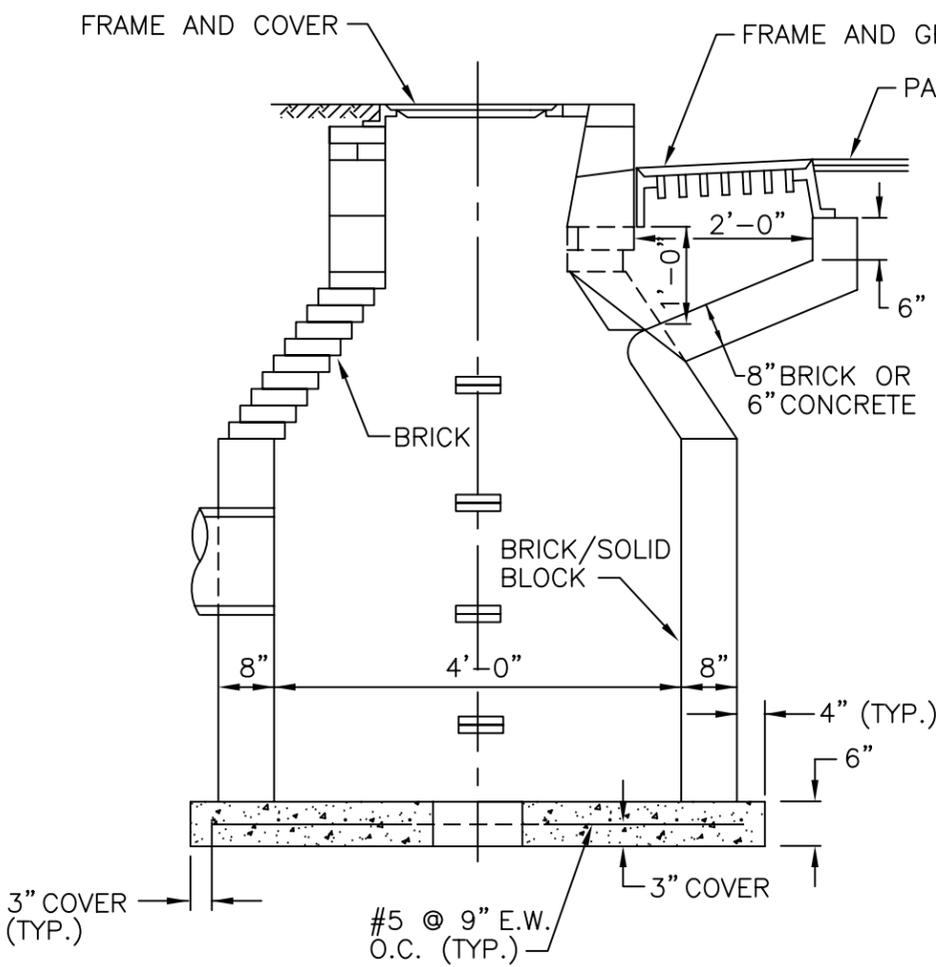
(2)-#5 x 4'-0" LONG  
DIAGONAL, E.S.  
TOP AND BOTTOM  
(AT BASE OPENING)



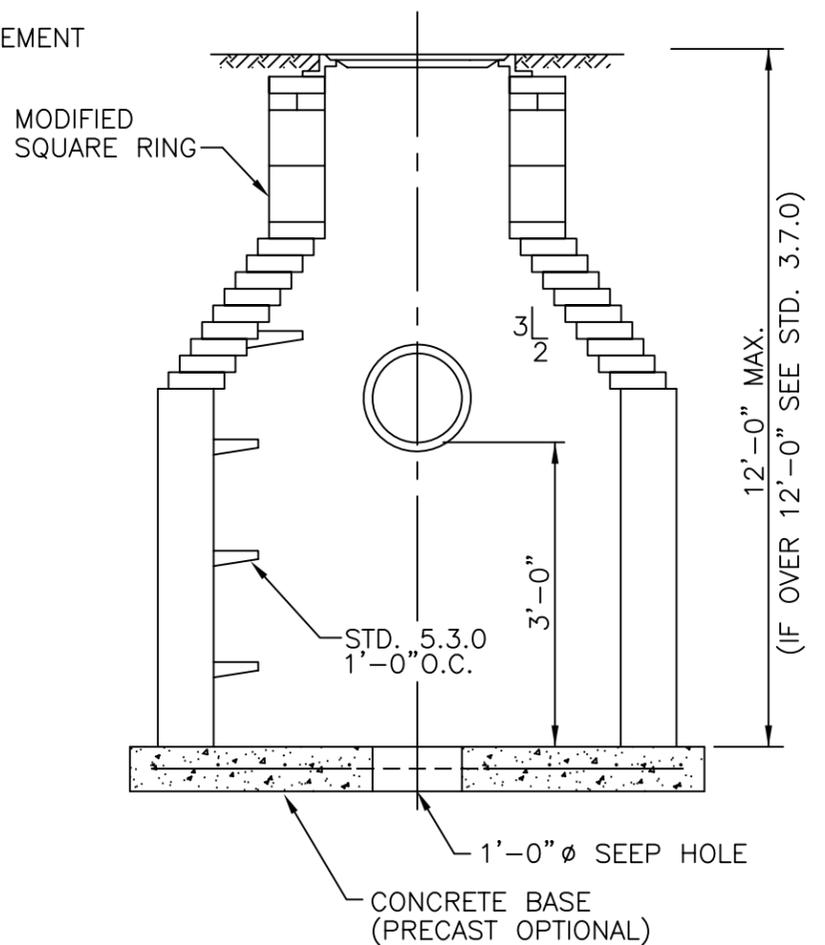
PLAN



MODIFIED SQUARE RING



SECTION A-A



SECTION B-B

NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION 702 OF THE R.I. STANDARD SPECIFICATIONS.
2. 1/2" CEMENT MORTAR PLASTER COAT REQUIRED ON ALL INSIDE AND OUTSIDE SURFACES.
3. REFER TO STD. 5.2.0 FOR MAXIMUM PIPE SIZES.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE
1	MLP	Mar 05

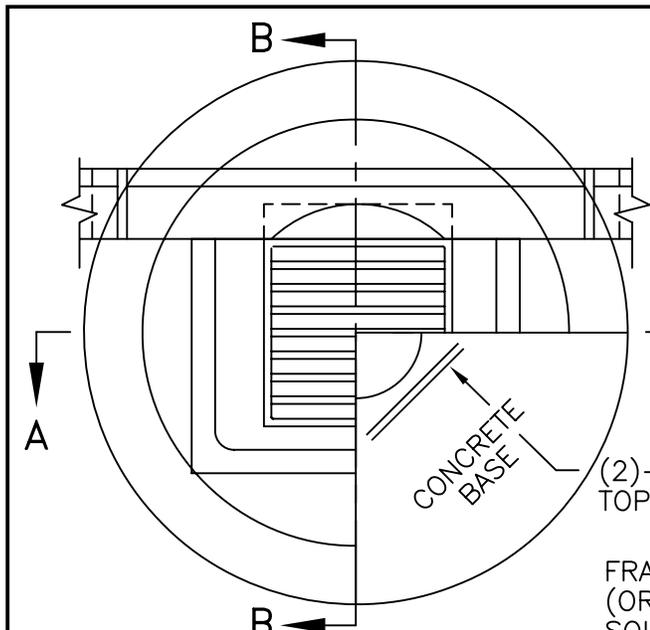
BRICK/SOLID BLOCK ROUND CATCH BASIN WITH GUTTER INLET

*James H. Casabelli*  
CHIEF ENGINEER  
TRANSPORTATION

*Edmund Parker Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

JUNE 15, 1998  
ISSUE DATE





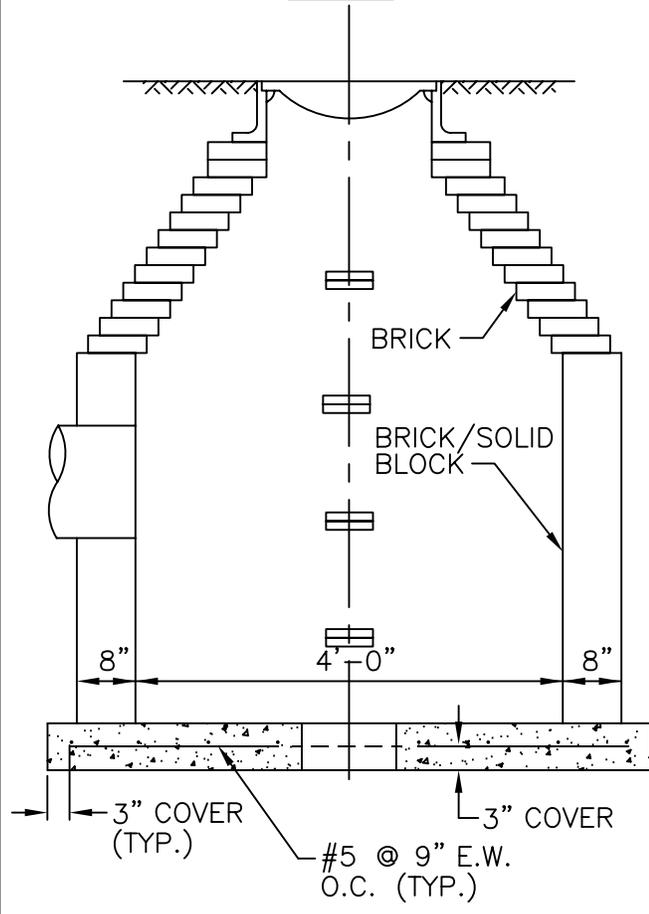
**NOTES:**

1. SHALL BE IN ACCORDANCE WITH SECTION 702 OF THE R.I. STANDARD SPECIFICATIONS.
2. 1/2" CEMENT MORTAR PLASTER REQUIRED ON ALL INSIDE AND OUTSIDE SURFACES.
3. REFER TO STD. 5.2.0 FOR MAXIMUM PIPE SIZES.

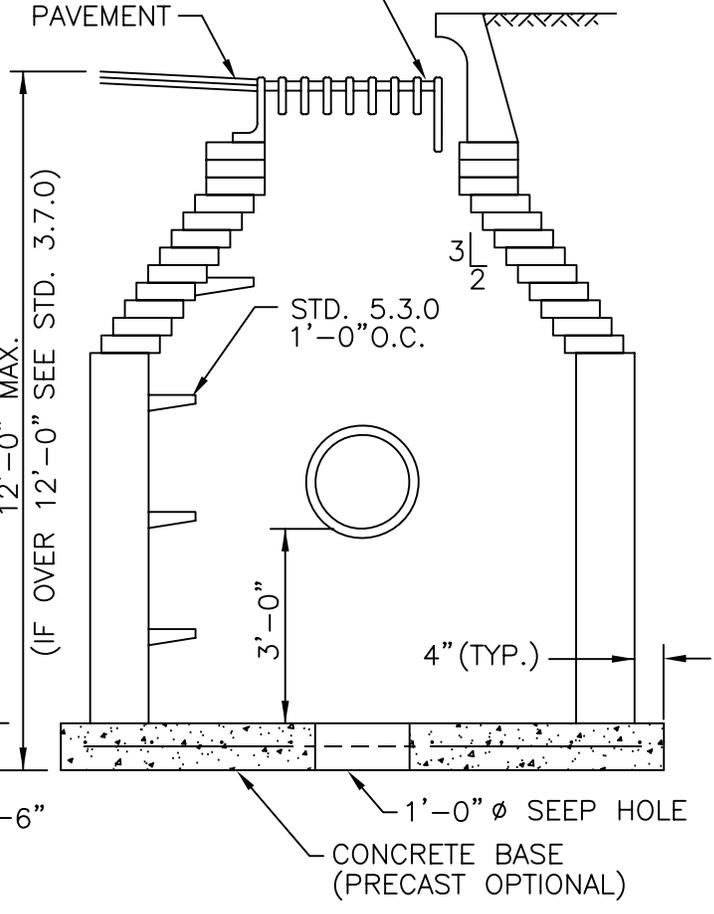
(2) - #5 x 4'-0" LONG, DIAGONAL, TOP AND BOTTOM (AT BASE OPENING)

FRAME AND GRATE  
(ORDER 4 FLANGE AND SQUARE RING WHEN APRON STONE IS NOT USED)

**PLAN**



**SECTION A-A**



**SECTION B-B**

**RHODE ISLAND DEPARTMENT OF TRANSPORTATION**

REVISIONS		
NO.	BY	DATE
1	MLP	Mar 05

**BRICK/SOLID BLOCK  
TYPE "F" ROUND CATCH BASIN**

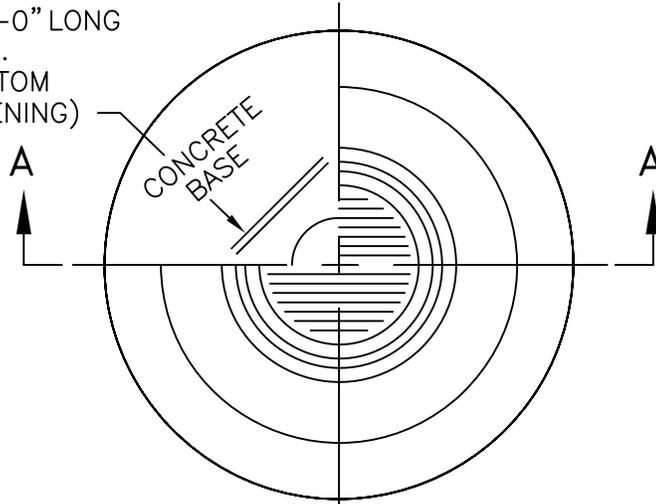
*James A. Casaldi*  
CHIEF ENGINEER  
TRANSPORTATION

*Edmund J. Parker Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

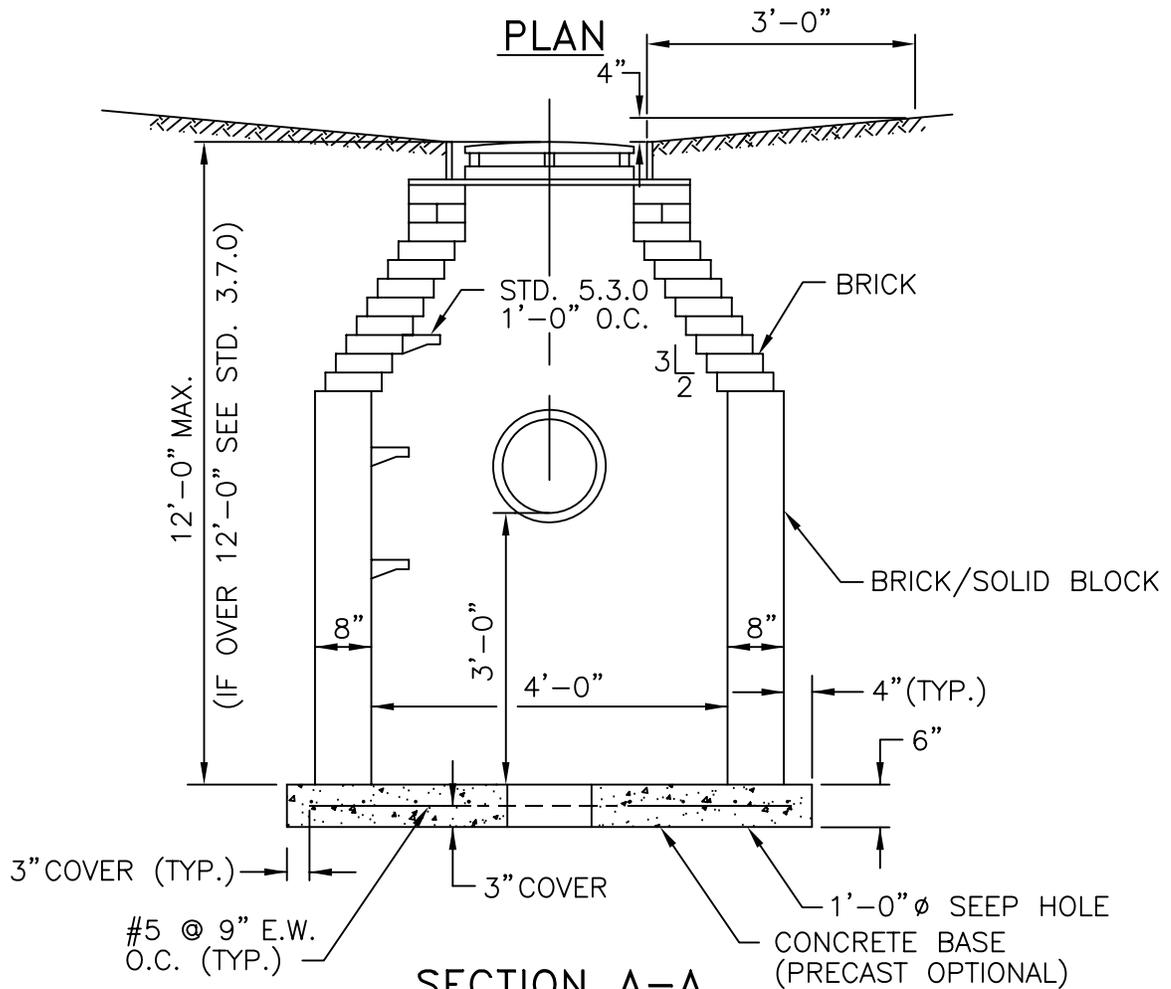
JUNE 15, 1998  
ISSUE DATE



(2)-#5 BY 4'-0" LONG  
DIAGONAL, E.S.  
TOP AND BOTTOM  
(AT BASE OPENING)



PLAN



SECTION A-A

NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION 702 OF THE R.I. STANDARD SPECIFICATIONS.
2. 1/2" CEMENT MORTAR PLASTER COAT REQUIRED ON ALL INSIDE AND OUTSIDE SURFACES.
3. REFER TO STD. 5.2.0 FOR MAXIMUM PIPE SIZES.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

BRICK/SOLID BLOCK  
TYPE "R" CATCH BASIN

REVISIONS		
NO.	BY	DATE
1	MLP	Mar 05

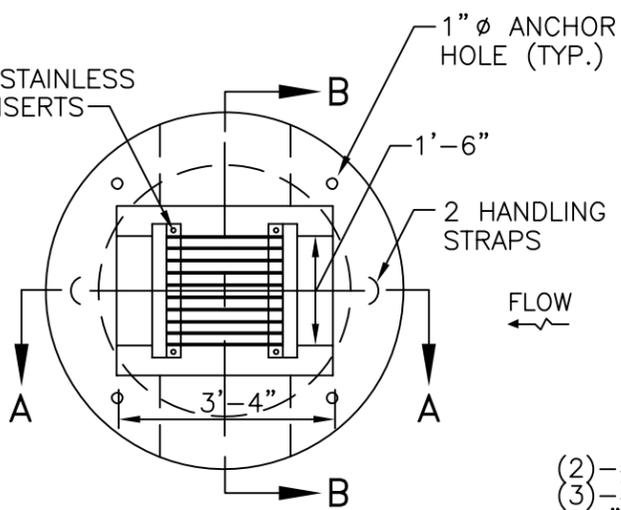
*James A. Casaldi*  
CHIEF ENGINEER  
TRANSPORTATION

*Edmund J. Parker Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

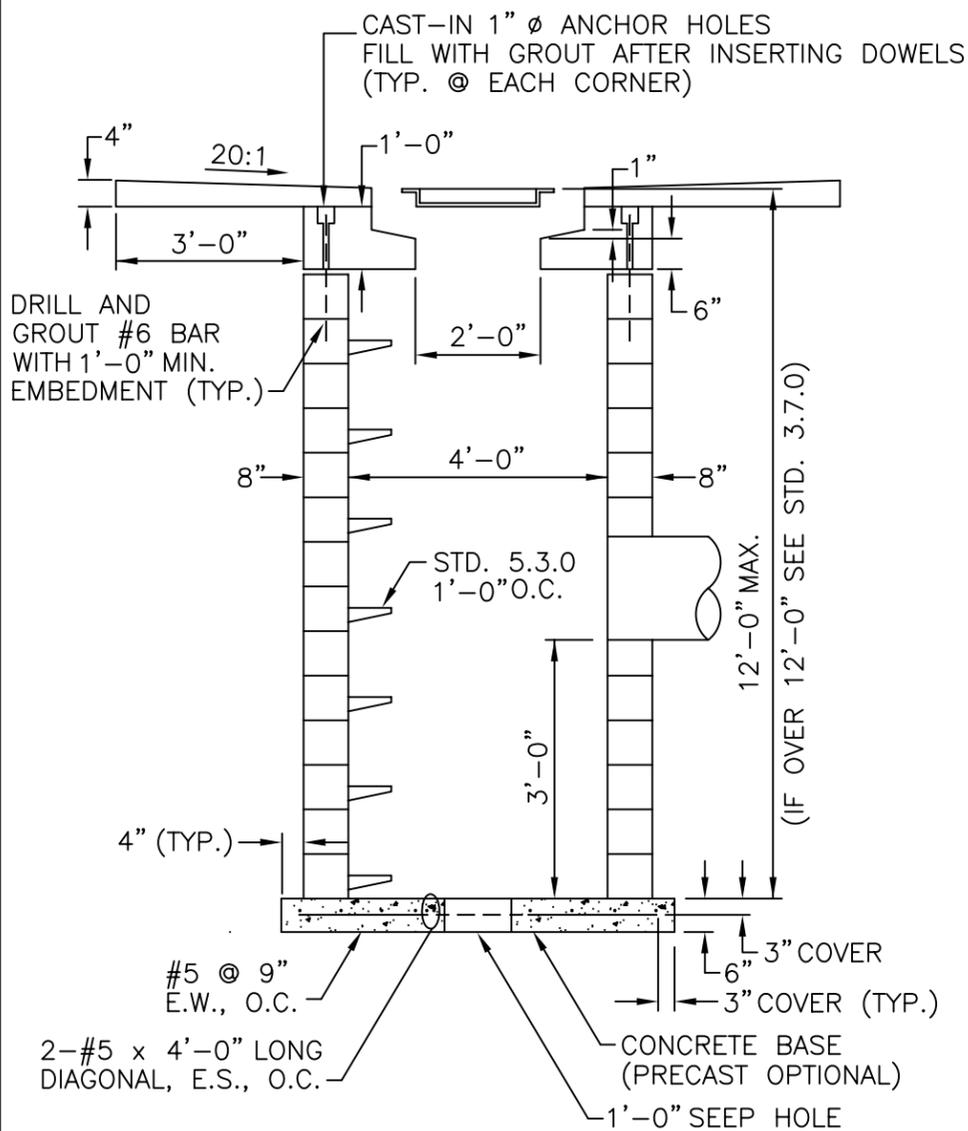
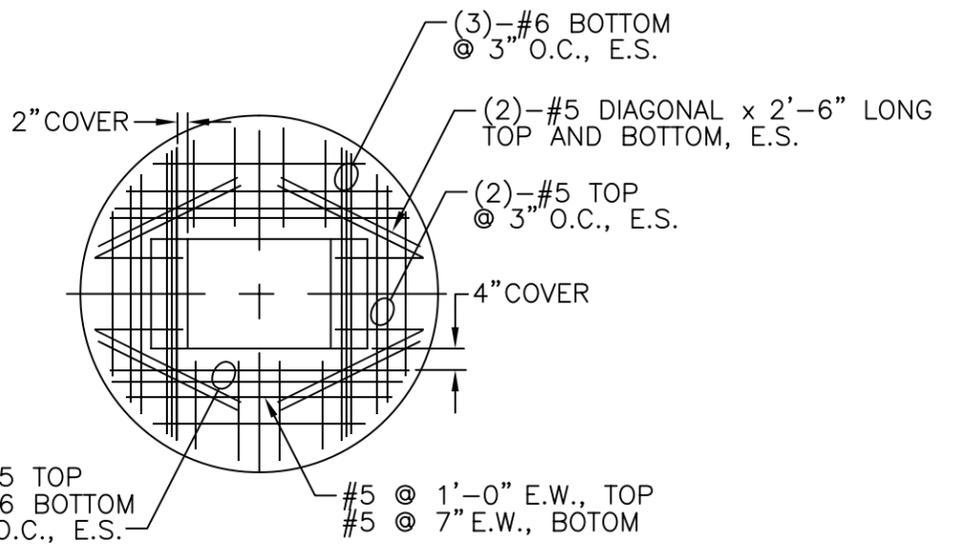
JUNE 15, 1998  
ISSUE DATE



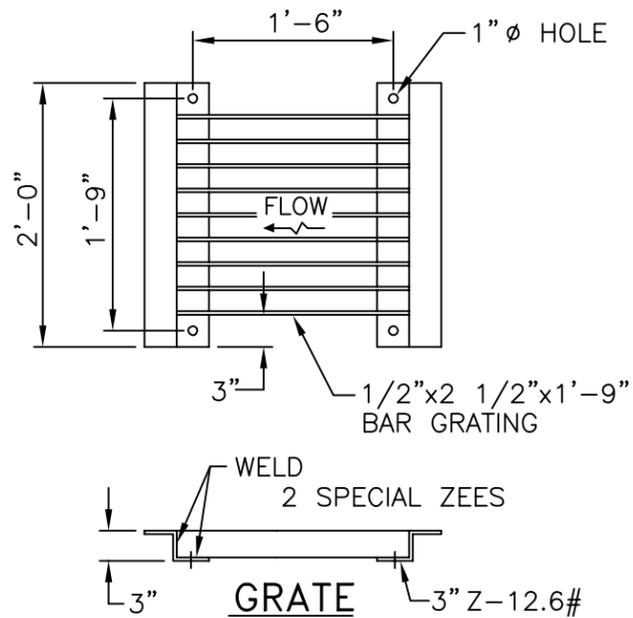
4-3/4"  $\phi$   
GALVANIZED/STAINLESS  
THREADED INSERTS



PLAN



SECTION A-A



SECTION B-B

NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION 702 OF THE R.I. STANDARD SPECIFICATIONS.
2. 1/2" CEMENT MORTAR PLASTER COAT REQUIRED ON ALL INSIDE AND OUTSIDE SURFACES.
3. REFER TO STD. 5.2.0 FOR MAXIMUM PIPE SIZES.
4. ALL REINFORCING SHALL BE EPOXY COATED.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

SOLID BLOCK FLUSH ROUND CATCH BASIN

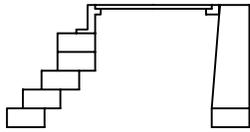
REVISIONS		
NO.	BY	DATE
1	MLP	Mar 05

*James H. Capaldi*  
CHIEF ENGINEER  
TRANSPORTATION

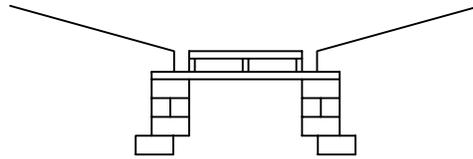
*Edmund J. Parker Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

JUNE 15, 1998  
ISSUE DATE

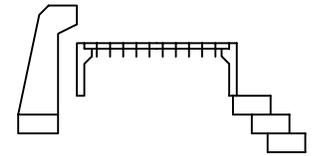




TYPE "D"

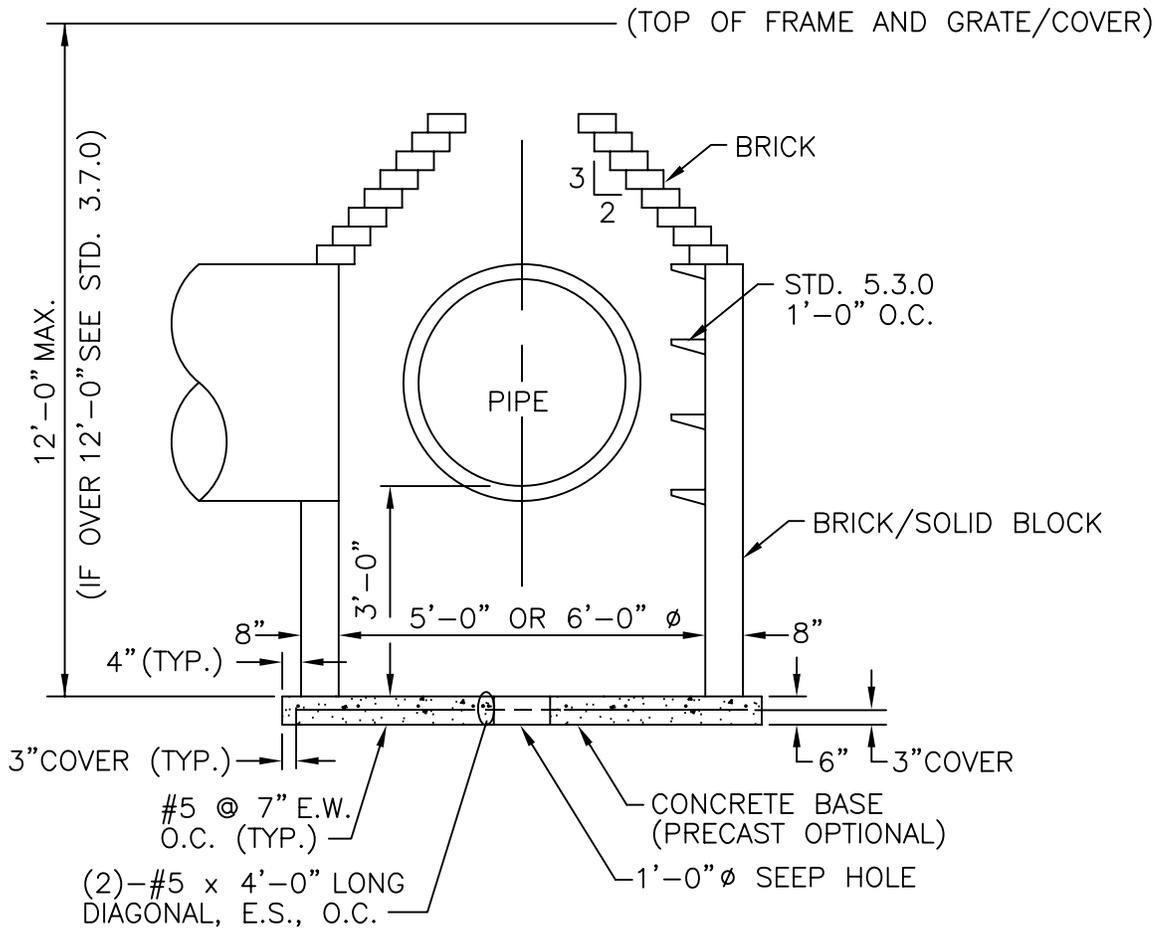


TYPE "R"



TYPE "F"

TYPE CATCH BASIN AS REQUIRED



NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION 702 OF THE R.I. STANDARD SPECIFICATIONS.
2. 1/2" CEMENT MORTAR PLASTER COAT REQUIRED ON ALL INSIDE AND OUTSIDE SURFACES.
3. REFER TO STD. 5.2.0 FOR MAXIMUM PIPE SIZES.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE
1	MLP	Mar 05

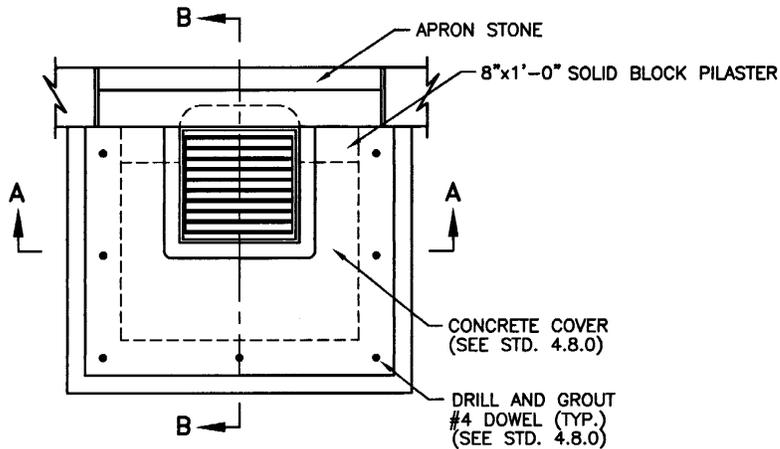
BRICK/SOLID BLOCK  
5'-0" OR 6'-0" ROUND CATCH BASIN

*James A. Casaldi*  
CHIEF ENGINEER  
TRANSPORTATION

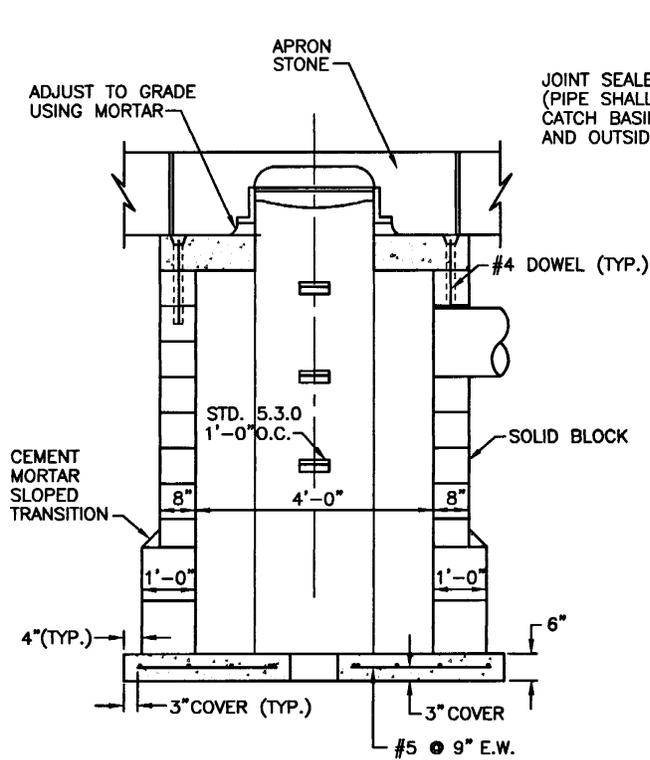
*Edmund J. Parker Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

JUNE 15, 1998  
ISSUE DATE

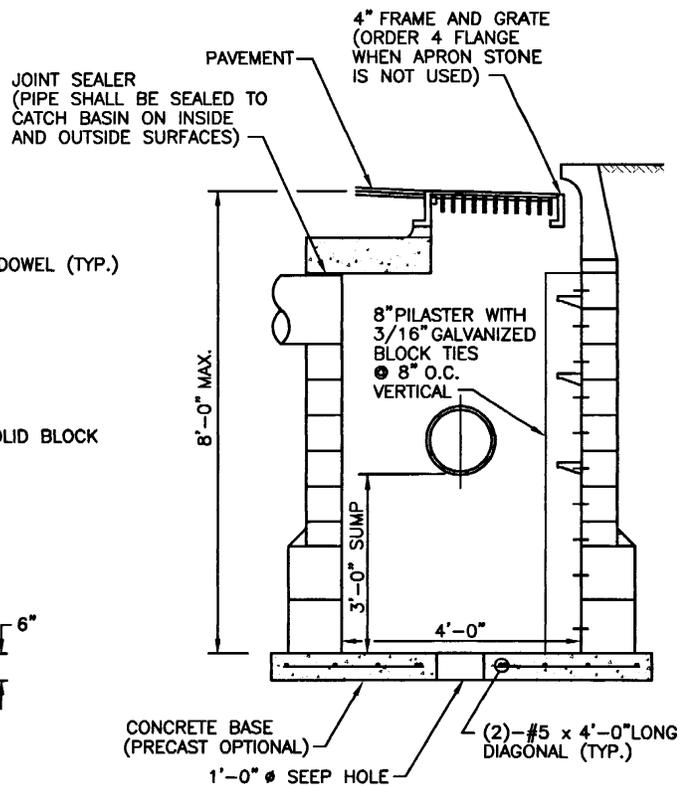




PLAN



SECTION A-A



SECTION B-B

NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION 702 OF THE R.I. STANDARD SPECIFICATIONS.
2. 1/2" CEMENT MORTAR PLASTER COAT REQUIRED ON ALL INSIDE AND OUTSIDE SURFACES.
3. ADJUST DOWEL LOCATION BASED ON PIPE CONFIGURATION, AS REQUIRED.
4. USE 8" WALLS UP TO 6'-0" DEPTH, USE 1'-0" WALLS UP TO 8'-0" DEPTH.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

SOLID BLOCK SHALLOW TYPE "F" SQUARE CATCH BASIN  
(PIPE COVER 1'-6" TO 3'-0")

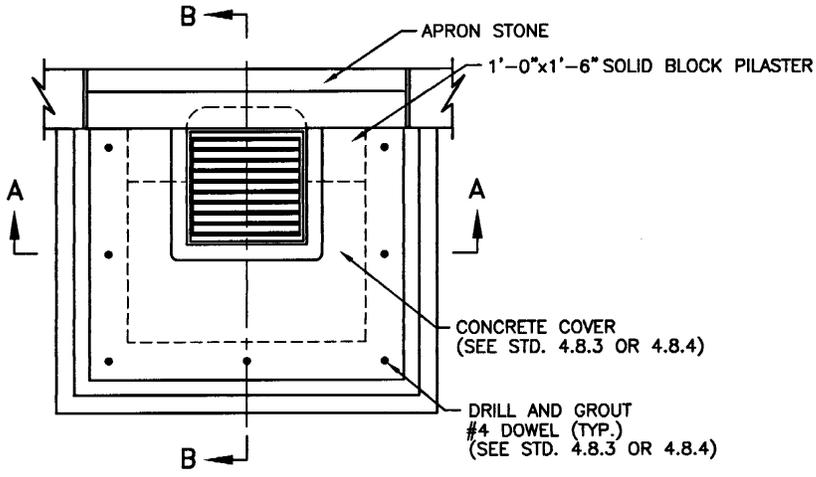
REVISIONS		
NO.	BY	DATE

*James D. Capaldi*  
CHIEF ENGINEER  
TRANSPORTATION

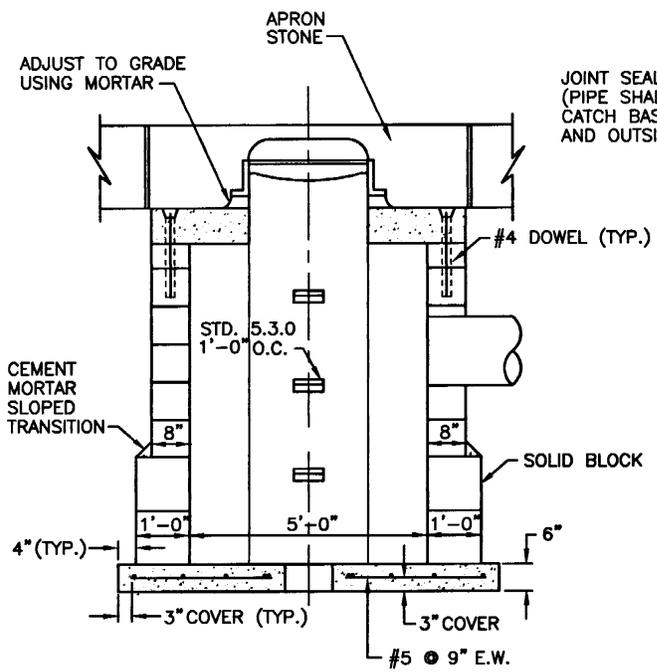
*Edward J. Parker*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

JUNE 15, 1998  
ISSUE DATE

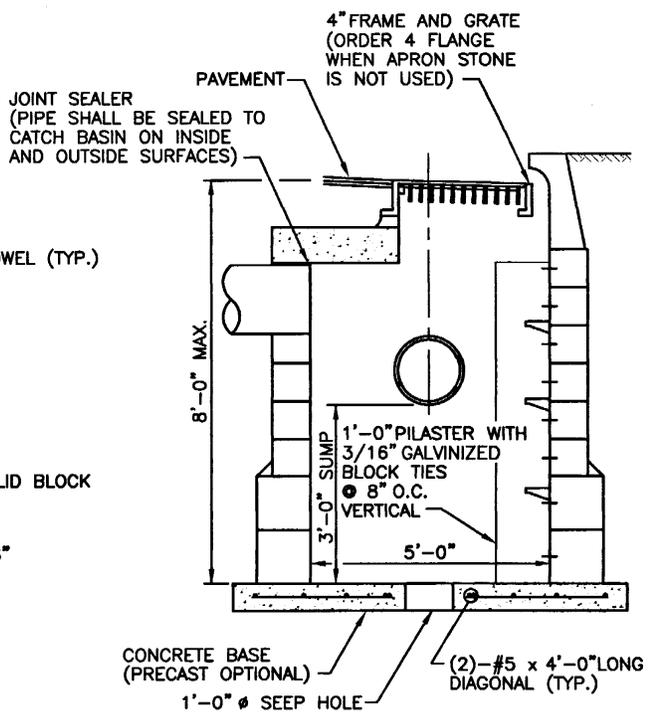




PLAN



SECTION A-A



SECTION B-B

- NOTES:**
1. SHALL BE IN ACCORDANCE WITH SECTION 702 OF THE R.I. STANDARD SPECIFICATIONS.
  2. 1/2" CEMENT MORTAR PLASTER COAT REQUIRED ON ALL INSIDE AND OUTSIDE SURFACES.
  3. ADJUST DOWEL LOCATION BASED ON PIPE CONFIGURATION, AS REQUIRED.
  4. USE 8" WALLS UP TO 6'-0" DEPTH, USE 1'-0" WALLS UP TO 8'-0" DEPTH.

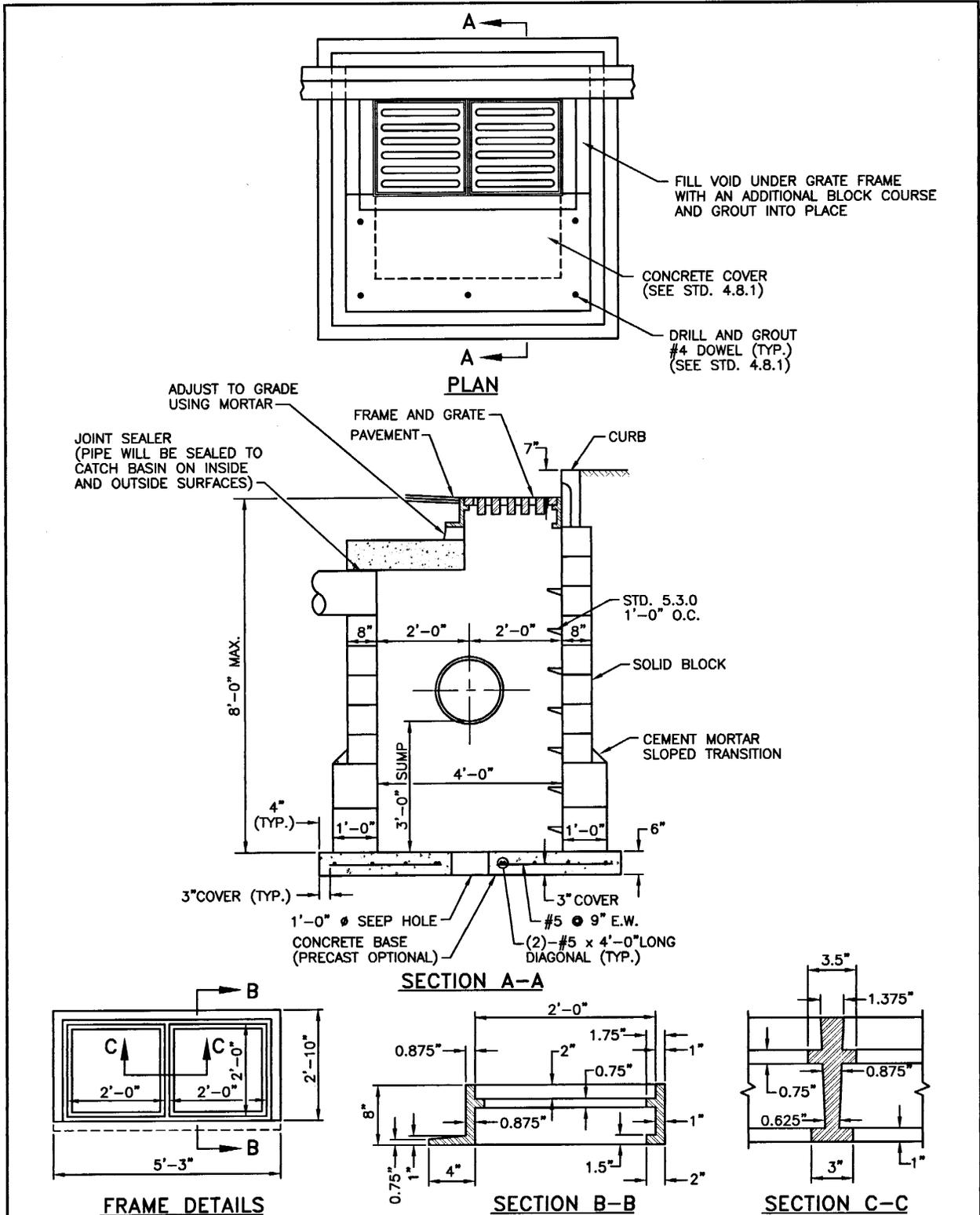
RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS			SOLID BLOCK SHALLOW 5'-0" OR 6'-0" SQUARE CATCH BASIN (PIPE COVER 1'-6" TO 3'-0")	R.I. STANDARD 3.5.1
NO.	BY	DATE		

*James H. Capaldi*  
CHIEF ENGINEER  
TRANSPORTATION

*Edmund J. Parkin*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

JUNE 15, 1998  
ISSUE DATE



**NOTES:**

1. SHALL BE IN ACCORDANCE WITH SECTION 702 OF THE R.I. STANDARD SPECIFICATIONS.
2. 1/2" CEMENT MORTAR COAT REQUIRED ON ALL INSIDE AND OUTSIDE SURFACES.
3. 8" HIGH FRAME MAY BE SUBSTITUTED WITH A 4" HIGH FRAME AS NEEDED. SHOP DRAWINGS ARE REQUIRED.
4. ADJUST DOWEL LOCATION BASED ON PIPE CONFIGURATION, IF REQUIRED.
5. PIPE COVER FOR THIS DETAIL SHALL BE 1'-6" TO 3'-0".
6. USE 8" WALLS UP TO 6'-0" DEPTH, USE 1'-0" WALLS UP TO 8'-0" DEPTH.
7. TWO SINGLE FRAMES WITH THREE FLANGES AND TWIN GRATES MAY BE SUBSTITUTED FOR THE DOUBLE FRAME WITH TWIN GRATES.

**RHODE ISLAND DEPARTMENT OF TRANSPORTATION**

**SOLID BLOCK SHALLOW DOUBLE GRATE CATCH BASIN  
GRATE PARALLEL TO CURB**

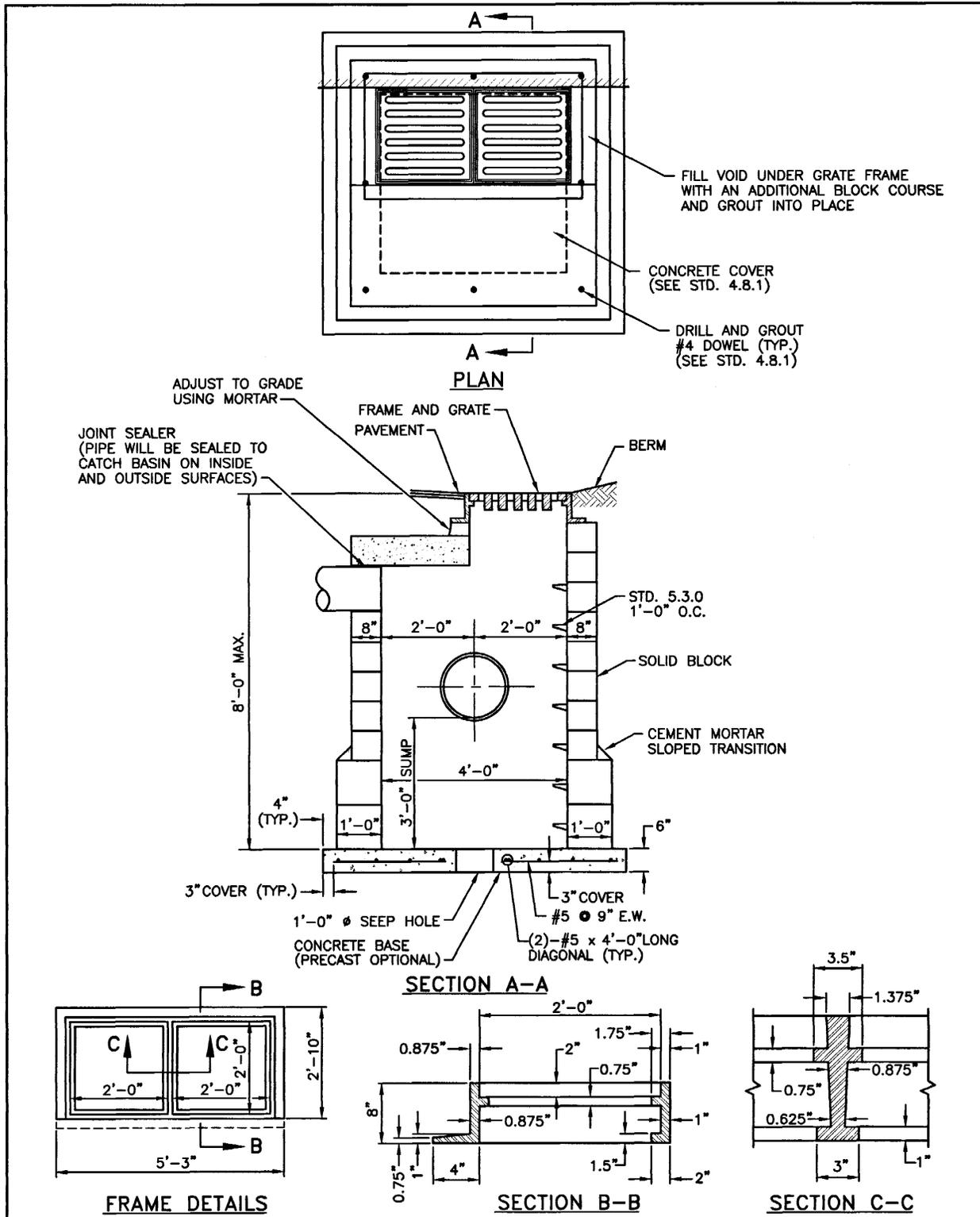
REVISIONS		
NO.	BY	DATE

*James D. Capaldi*  
 CHIEF ENGINEER  
 TRANSPORTATION

*Edward J. Perkins*  
 CHIEF DESIGN ENGINEER  
 TRANSPORTATION

JUNE 15, 1998  
 ISSUE DATE





- NOTES:**
1. SHALL BE IN ACCORDANCE WITH SECTION 702 OF THE R.I. STANDARD SPECIFICATIONS.
  2. 1/2" CEMENT MORTAR COAT REQUIRED ON ALL INSIDE AND OUTSIDE SURFACES.
  3. 8" HIGH FRAME MAY BE SUBSTITUTED WITH A 4" HIGH FRAME AS NEEDED. SHOP DRAWINGS ARE REQUIRED.
  4. ADJUST DOWEL LOCATION BASED ON PIPE CONFIGURATION, IF REQUIRED.
  5. PIPE COVER FOR THIS DETAIL SHALL BE 1'-6" TO 3'-0".
  6. USE 8" WALLS UP TO 6'-0" DEPTH, USE 1'-0" WALLS UP TO 8'-0" DEPTH.
  7. TWO SINGLE FRAMES WITH THREE FLANGES AND TWIN GRATES MAY BE SUBSTITUTED FOR THE DOUBLE FRAME WITH TWIN GRATES.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

**SOLID BLOCK SHALLOW DOUBLE GRATE CATCH BASIN  
GRATE PARALLEL TO EDGE OF PAVEMENT**

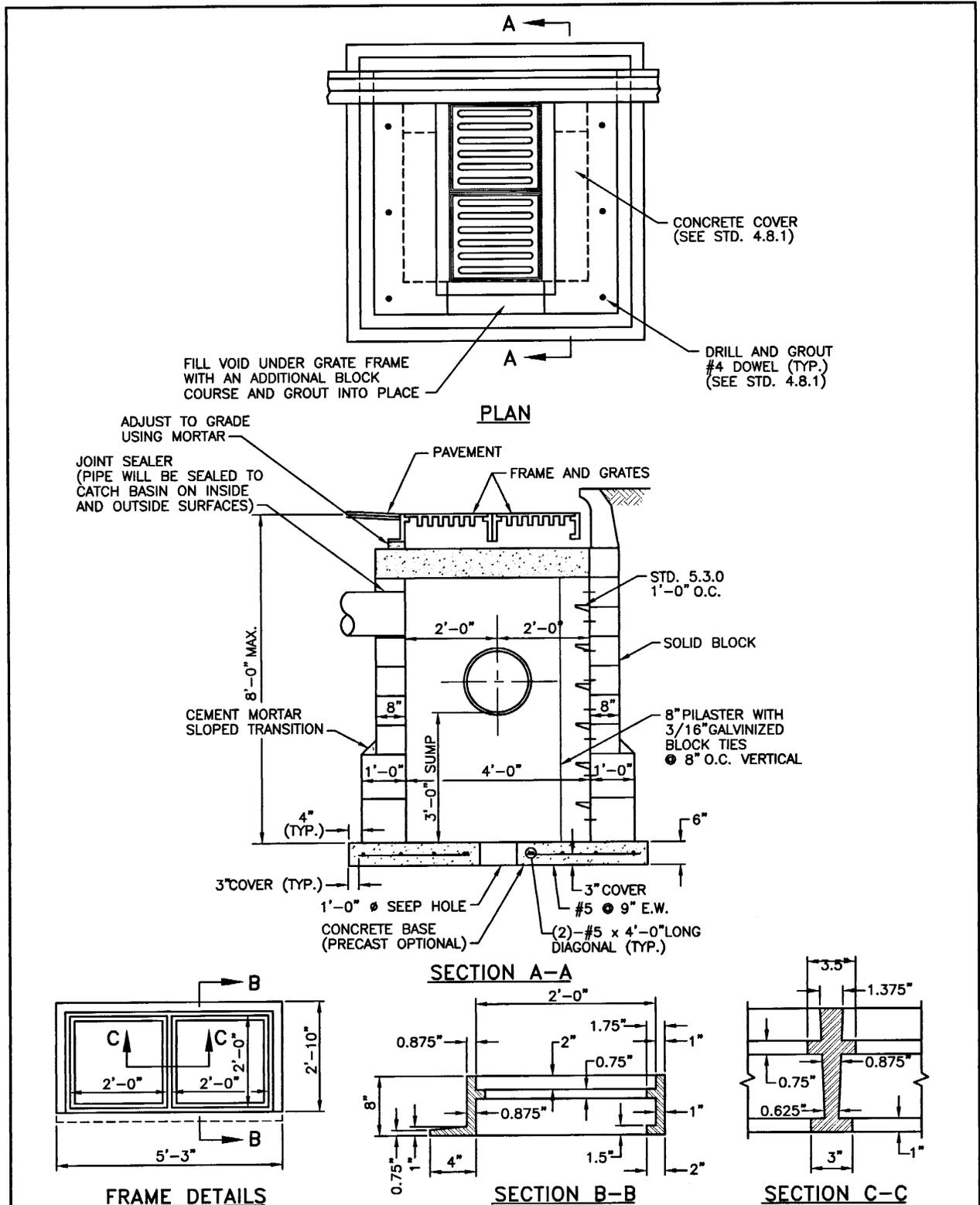
REVISIONS		
NO.	BY	DATE

*John A. Capaldi*  
CHIEF ENGINEER  
TRANSPORTATION

*Edmund R. Parker*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

JUNE 15, 1998  
ISSUE DATE





- NOTES:**
1. SHALL BE IN ACCORDANCE WITH SECTION 702 OF THE R.I. STANDARD SPECIFICATIONS.
  2. 1/2" CEMENT MORTAR COAT REQUIRED ON ALL INSIDE AND OUTSIDE SURFACES.
  3. 8" HIGH FRAME MAY BE SUBSTITUTED WITH A 4" HIGH FRAME AS NEEDED. SHOP DRAWINGS ARE REQUIRED.
  4. ADJUST DOWEL LOCATION BASED ON PIPE CONFIGURATION, IF REQUIRED.
  5. PIPE COVER FOR THIS DETAIL SHALL BE 1'-6" TO 3'-0"
  6. USE 8" WALLS UP TO 6'-0" DEPTH, USE 1'-0" WALLS UP TO 8'-0" DEPTH.
  7. TWO SINGLE FRAMES WITH THREE FLANGES AND TWIN GRATES MAY BE SUBSTITUTED FOR THE DOUBLE FRAME WITH TWIN GRATES.

**RHODE ISLAND DEPARTMENT OF TRANSPORTATION**

**SOLID BLOCK SHALLOW DOUBLE GRATE CATCH BASIN  
GRATE PERPENDICULAR TO CURB**

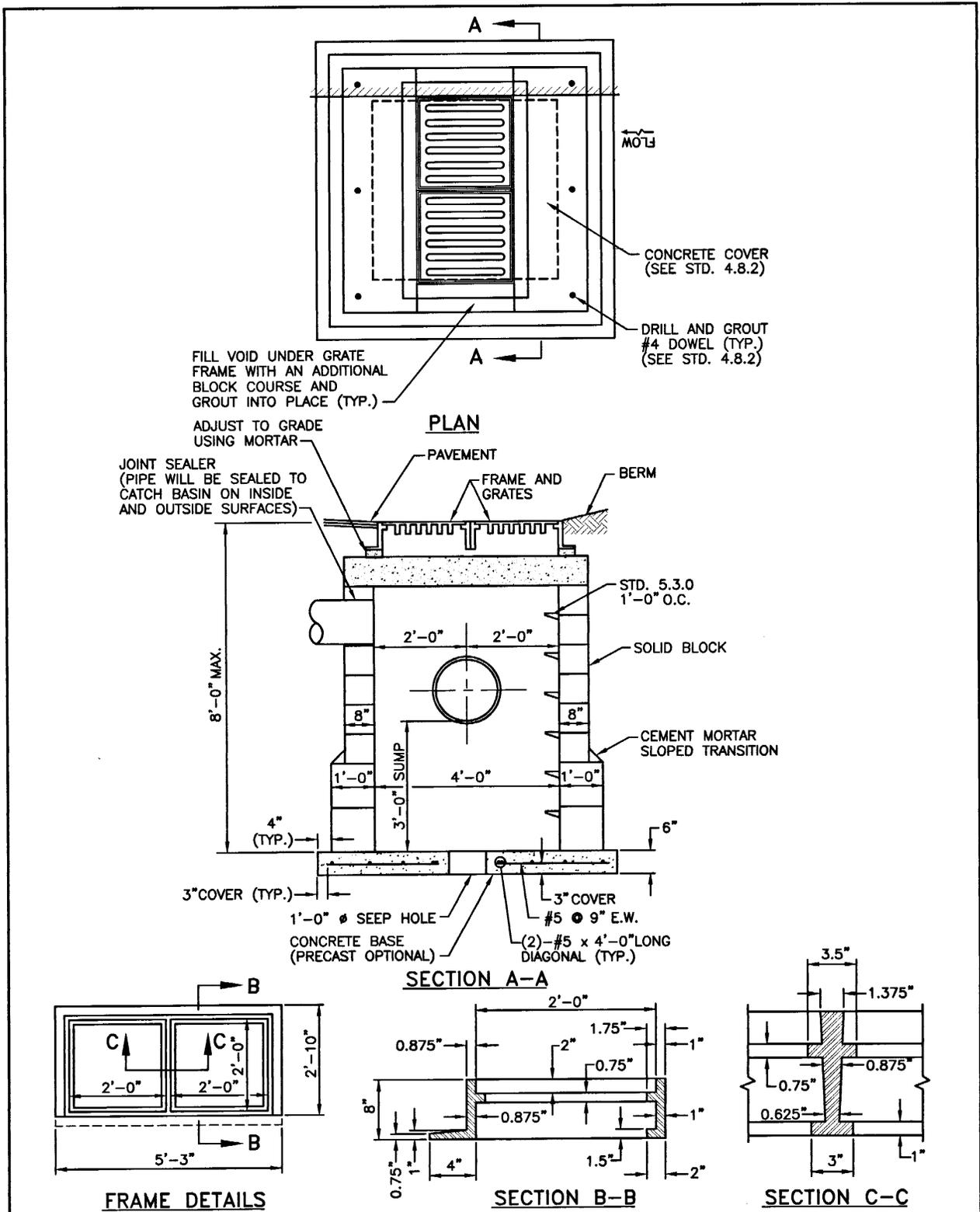
REVISIONS		
NO.	BY	DATE

  
 CHIEF ENGINEER  
 TRANSPORTATION

  
 CHIEF DESIGN ENGINEER  
 TRANSPORTATION

JUNE 15, 1998  
 ISSUE DATE

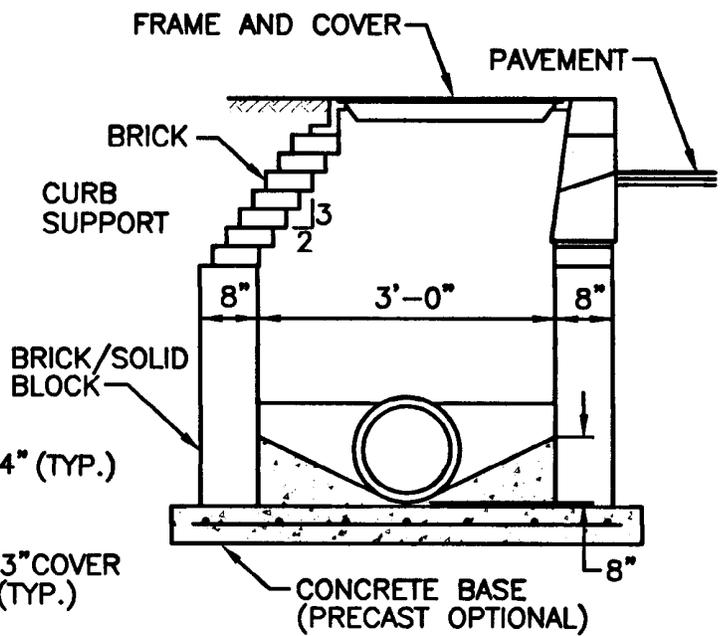
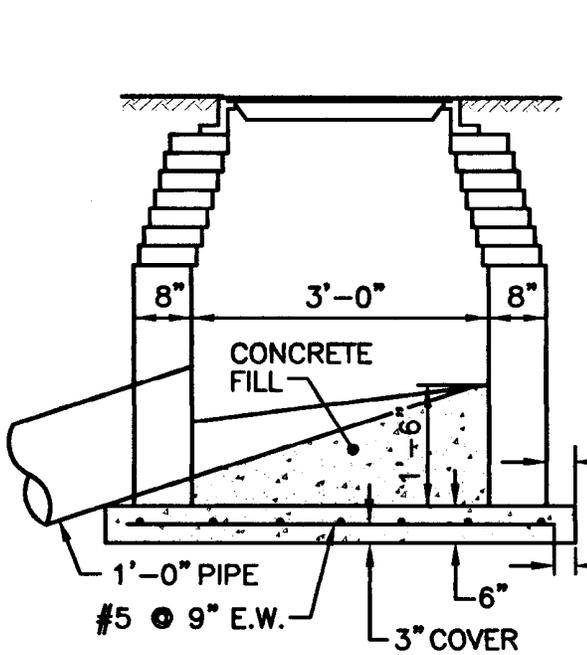
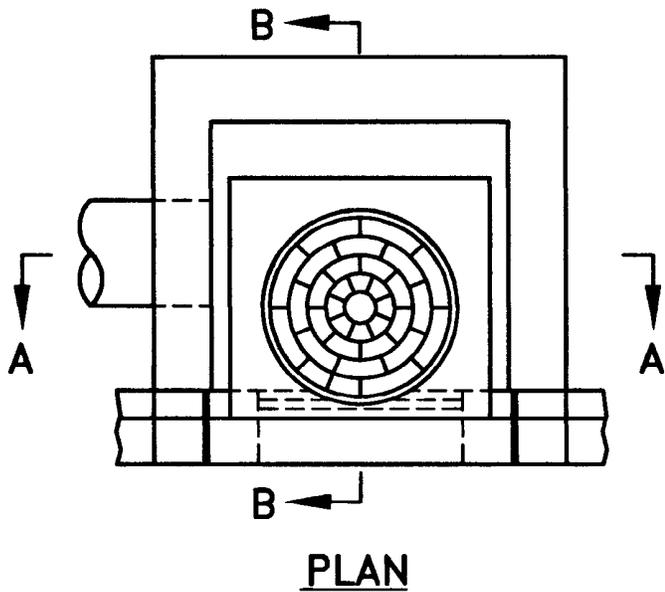
R.I.  
 STANDARD  
**3.5.4**



- NOTES:**
1. SHALL BE IN ACCORDANCE WITH SECTION 702 OF THE R.I. STANDARD SPECIFICATIONS.
  2. 1/2" CEMENT MORTAR COAT REQUIRED ON ALL INSIDE AND OUTSIDE SURFACES.
  3. 8" HIGH FRAME MAY BE SUBSTITUTED WITH A 4" HIGH FRAME AS NEEDED. SHOP DRAWINGS ARE REQUIRED.
  4. ADJUST DOWEL LOCATION BASED ON PIPE CONFIGURATION, IF REQUIRED.
  5. PIPE COVER FOR THIS DETAIL SHALL BE 1'-6" TO 3'-0".
  6. USE 8" WALLS UP TO 6'-0" DEPTH, USE 1'-0" WALLS UP TO 8'-0" DEPTH.
  7. TWO SINGLE FRAMES WITH THREE FLANGES AND TWIN GRATES MAY BE SUBSTITUTED FOR THE DOUBLE FRAME WITH TWIN GRATES.

**RHODE ISLAND DEPARTMENT OF TRANSPORTATION**

REVISIONS			<b>SOLID BLOCK SHALLOW DOUBLE GRATE CATCH BASIN</b> <b>GRATE PERPENDICULAR TO EDGE OF PAVEMENT</b>	
NO.	BY	DATE		
			 CHIEF ENGINEER TRANSPORTATION	JUNE 15, 1998 <small>ISSUE DATE</small>



**NOTES:**

1. SHALL BE IN ACCORDANCE WITH SECTION 702 OF THE R.I. STANDARD SPECIFICATIONS.
2. 1/2" CEMENT MORTAR PLASTER COAT REQUIRED ON ALL INSIDE AND OUTSIDE SURFACES.

**RHODE ISLAND DEPARTMENT OF TRANSPORTATION**

REVISIONS		
NO.	BY	DATE

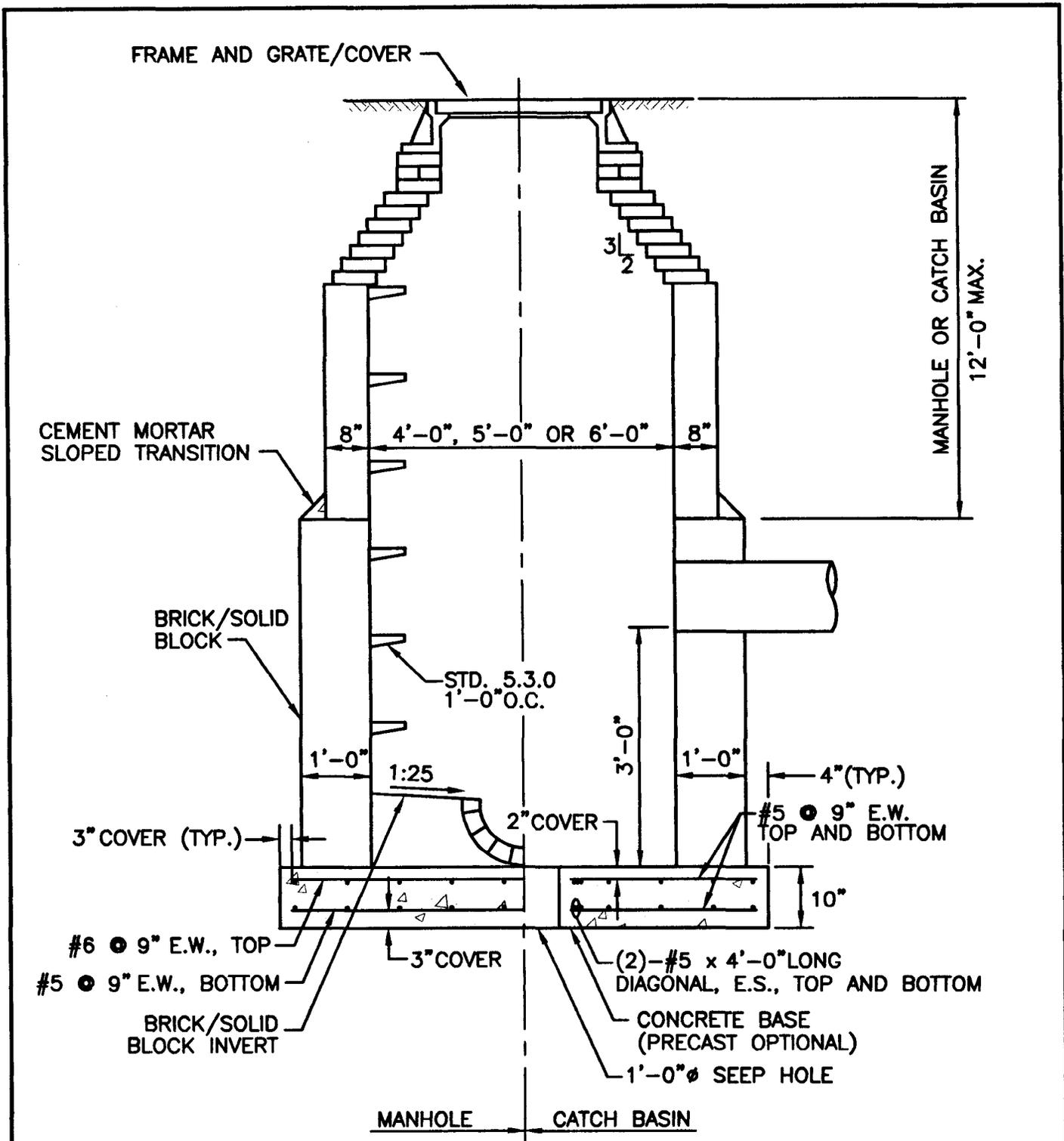
**BRICK/SOLID BLOCK DROP INLET**

*James A. Capaldi*  
 CHIEF ENGINEER  
 TRANSPORTATION

*Edmund J. Parker Jr.*  
 CHIEF DESIGN ENGINEER  
 TRANSPORTATION

**JUNE 15, 1998**  
 ISSUE DATE





**NOTES:**

1. SHALL BE IN ACCORDANCE WITH SECTION 702 OF THE R.I. STANDARD SPECIFICATIONS.
2. 1/2" CEMENT MORTAR PLASTER COAT REQUIRED ON ALL INSIDE AND OUTSIDE SURFACES.
3. REFER TO STD. 5.2.0 FOR MAXIMUM PIPE SIZES.

**RHODE ISLAND DEPARTMENT OF TRANSPORTATION**

**BRICK/SOLID BLOCK ROUND  
MANHOLES AND CATCH BASINS  
DEPTH GREATER THAN 12'-0"**



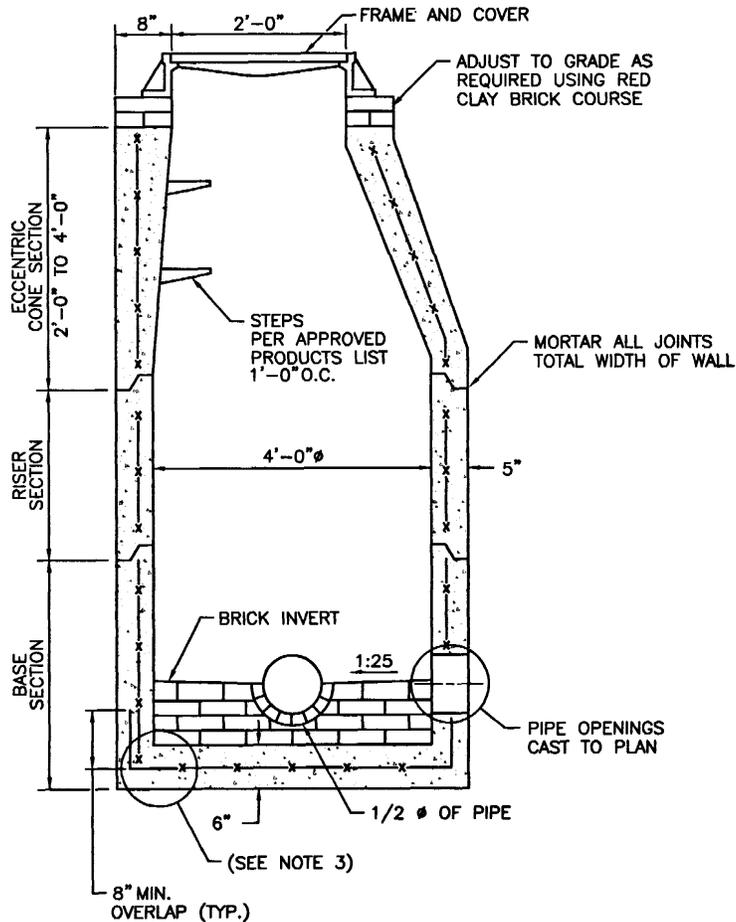
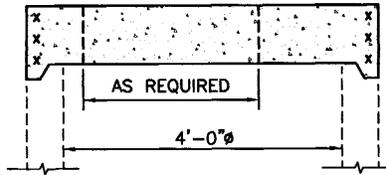
REVISIONS		
NO.	BY	DATE

*James A. Casaldi*  
CHIEF ENGINEER  
TRANSPORTATION

*Edmund J. Parker*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

JUNE 15, 1998  
ISSUE DATE

ALTERNATE TOP LOADING (SEE NOTES 7 AND 8)



**NOTES:**

1. SHALL BE IN ACCORDANCE WITH SECTION 702 OF THE R.I. STANDARD SPECIFICATIONS.
2. CIRCUMFERENTIAL STEEL REINFORCEMENT REQUIRED = 0.12 SQ. IN. / LIN. FT. MINIMUM.
3. STEEL REINFORCEMENT FOR BASE SECTION BOTTOM SHALL BE A MINIMUM OF 0.12 SQ. IN./LIN. FT. (BOTH WAYS).
4. ONE POUR MONOLITHIC BASE SECTION.
5. ANY NECESSARY ADJUSTMENTS DURING CONSTRUCTION WILL BE DONE BY SAW-CUTTING AND/OR CORING ONLY. NO JACKHAMMERS, HAMMERS AND CHISELS OR PNEUMATIC TOOLS WILL BE ALLOWED.
6. STEPS SHALL CONFORM TO STD. 5.3.0 AND SHALL BE INSTALLED AT THE CASTING PLANT.
7. ALTERNATE TOP SLAB IS STEEL REINFORCED TO MEET OR EXCEED H-25 LOADING (SEE STD. 4.7.2).
8. ALTERNATE TOP SLAB IS ONLY FOR USE WHEN REDUCING SECTION DOES NOT FIT BECAUSE OF STRUCTURE DEPTH.
9. REFER TO STD. 5.2.0 FOR MAXIMUM PIPE SIZES.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

PRECAST 4'-0" ROUND MANHOLE

REVISIONS		
NO.	BY	DATE

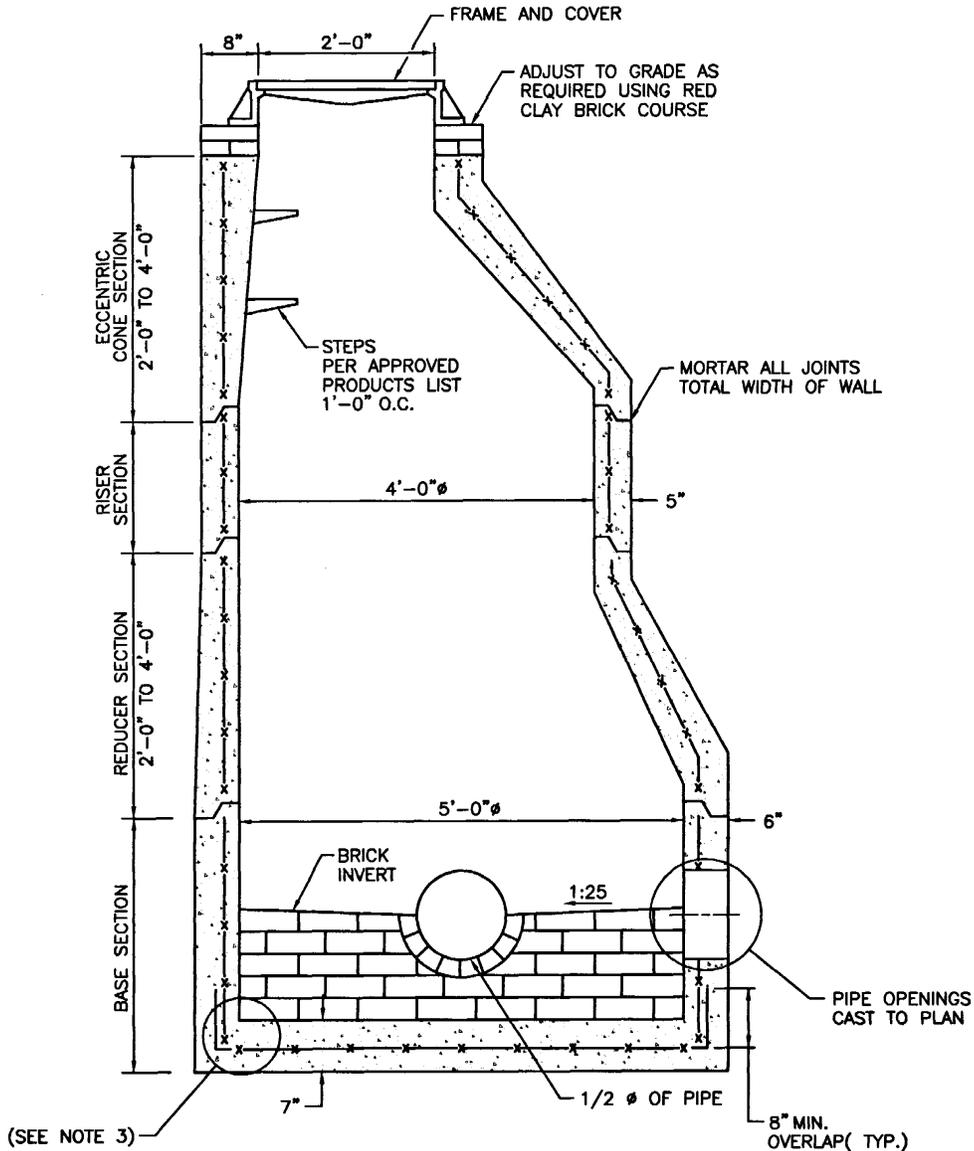
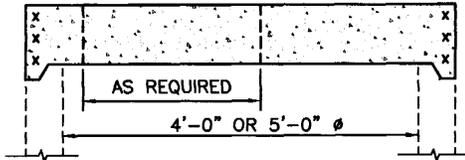
*James A. Gaudin*  
 CHIEF ENGINEER  
 TRANSPORTATION

*Edmund Parkes*  
 CHIEF DESIGN ENGINEER  
 TRANSPORTATION

JUNE 15, 1998  
 ISSUE DATE



ALTERNATE TOP LOADING (SEE NOTES 7 AND 8)



**NOTES:**

1. SHALL BE IN ACCORDANCE WITH SECTION 702 OF THE R.I. STANDARD SPECIFICATIONS.
2. CIRCUMFERENTIAL STEEL REINFORCEMENT REQUIRED = 0.15 SQ. IN./LIN. FT. MINIMUM.
3. STEEL REINFORCEMENT FOR BASE SECTION BOTTOM SHALL BE A MINIMUM OF 0.12 SQ. IN./LIN. FT. (BOTH WAYS).
4. ONE POUR MONOLITHIC BASE SECTION.
5. ANY NECESSARY ADJUSTMENTS DURING CONSTRUCTION WILL BE DONE BY SAW-CUTTING AND/OR CORING ONLY. NO JACKHAMMERS, HAMMERS AND CHISELS OR PNEUMATIC TOOLS WILL BE ALLOWED.
6. STEPS SHALL CONFORM TO STD. 5.3.0 AND SHALL BE INSTALLED AT THE CASTING PLANT.
7. ALTERNATE TOP SLAB IS STEEL REINFORCED TO MEET OR EXCEED H-25 LOADING (SEE STD. 4.7.0).
8. ALTERNATE TOP SLAB IS ONLY FOR USE WHEN REDUCING SECTION DOES NOT FIT BECAUSE OF STRUCTURE DEPTH.
9. REFER TO STD. 5.2.0 FOR MAXIMUM PIPE SIZES.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

PRECAST 5'-0" ROUND MANHOLE

REVISIONS		
NO.	BY	DATE

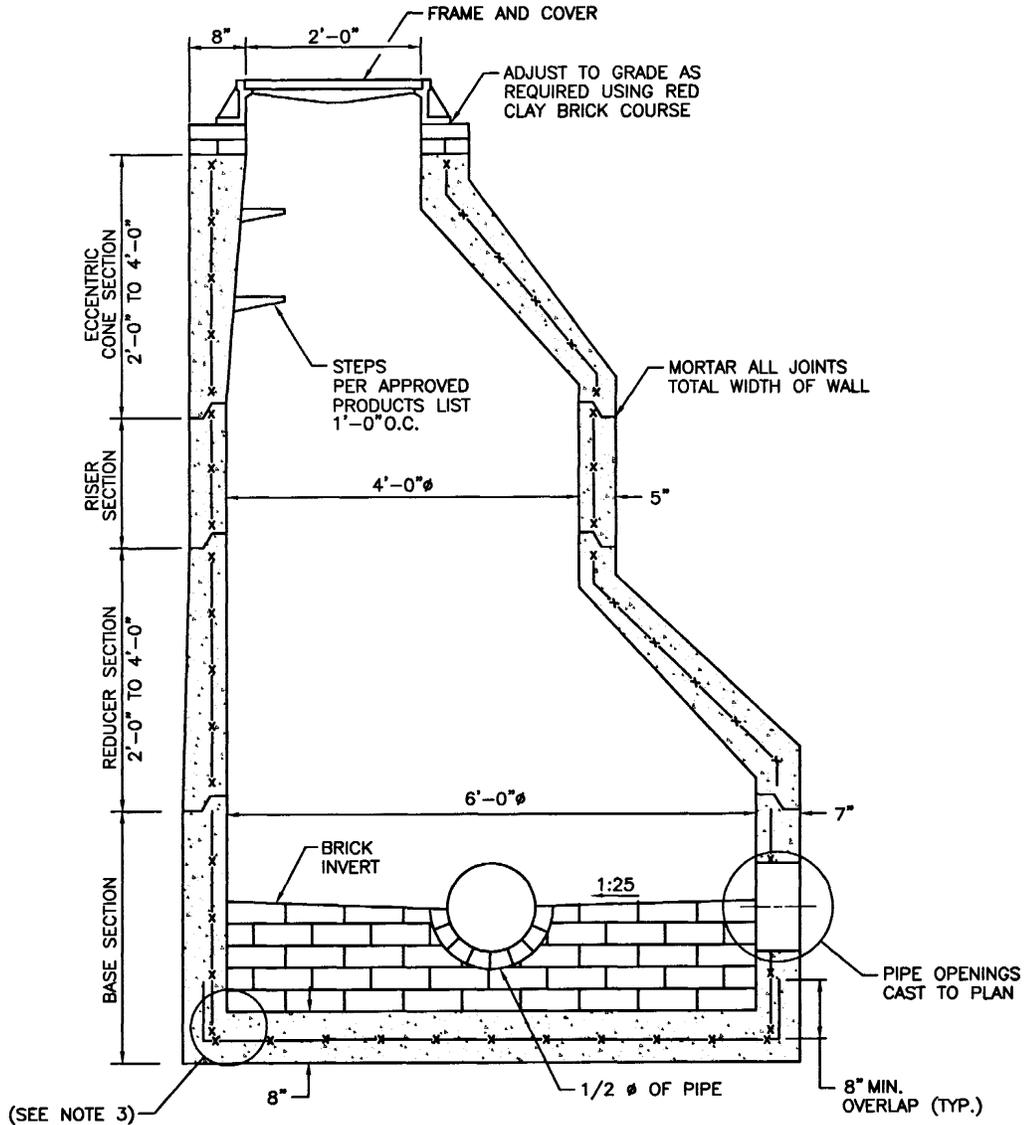
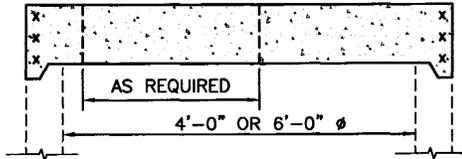
*James A. Capelli*  
 CHIEF ENGINEER  
 TRANSPORTATION

*Edmund Parkes Jr.*  
 CHIEF DESIGN ENGINEER  
 TRANSPORTATION

JUNE 15, 1998  
 ISSUE DATE



ALTERNATE TOP LOADING (SEE NOTES 7 AND 8)



**NOTES:**

1. SHALL BE IN ACCORDANCE WITH SECTION 702 OF THE R.I. STANDARD SPECIFICATIONS.
2. CIRCUMFERENTIAL STEEL REINFORCEMENT REQUIRED = 0.15 SQ. IN./LIN. FT. MINIMUM.
3. STEEL REINFORCEMENT FOR BASE SECTION BOTTOM SHALL BE A MINIMUM OF 0.12 SQ. IN./LIN. FT. (BOTH WAYS).
4. ONE POUR MONOLITHIC BASE SECTION.
5. ANY NECESSARY ADJUSTMENTS DURING CONSTRUCTION WILL BE DONE BY SAW-CUTTING AND/OR CORING ONLY. NO JACKHAMMERS, HAMMERS AND CHISELS OR PNEUMATIC TOOLS WILL BE ALLOWED.
6. STEPS SHALL CONFORM TO STD. 5.3.0 AND SHALL BE INSTALLED AT THE CASTING PLANT.
7. ALTERNATE TOP SLAB IS STEEL REINFORCED TO MEET OR EXCEED H-25 LOADING (SEE STD. 4.7.2).
8. ALTERNATE TOP SLAB IS ONLY FOR USE WHEN REDUCING SECTION DOES NOT FIT BECAUSE OF STRUCTURE DEPTH.
9. REFER TO STD. 5.2.0 FOR MAXIMUM PIPE SIZES.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

**PRECAST 6'-0" ROUND MANHOLE**

REVISIONS		
NO.	BY	DATE

*John A. Capaldi*  
 CHIEF ENGINEER  
 TRANSPORTATION

*Edward J. Perkins*  
 CHIEF DESIGN ENGINEER  
 TRANSPORTATION

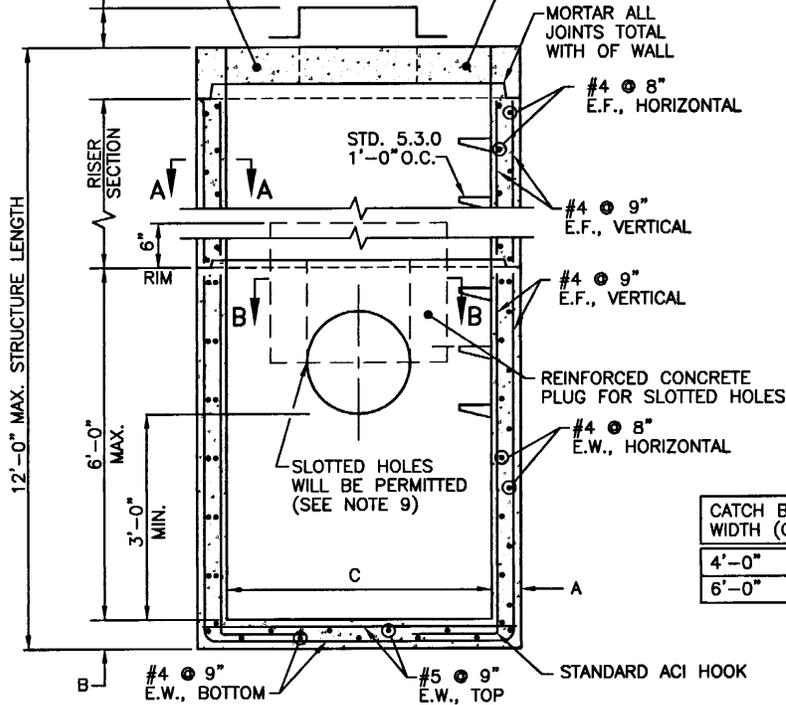
JUNE 15, 1998  
 ISSUE DATE



ADJUST TO GRADE AS REQUIRED  
USING RED CLAY BRICK COURSE

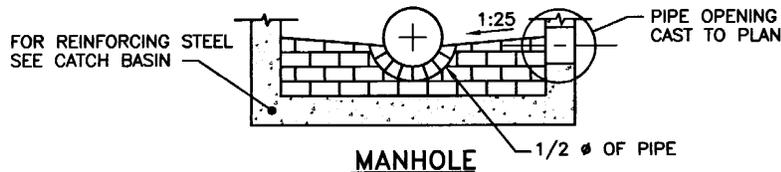
REFER TO STD. 4.6.1 FOR TOP SLAB  
FOR ALTERNATE TOP SLAB MONOLITHIC  
WITH RISER SECTION, SEE STD. 4.6.2

2'-0" MAX. COVER

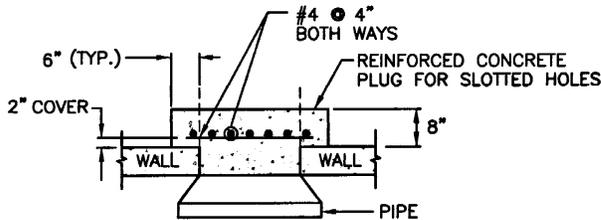


CATCH BASIN WIDTH (C)	A	B
4'-0"	8"	8"
6'-0"	9"	9"

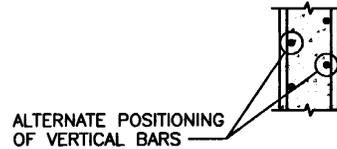
**CATCH BASIN**



**MANHOLE**



**SECTION B-B**



**SECTION A-A**

**NOTES:**

1. SHALL BE IN ACCORDANCE WITH SECTION 702 OF THE R.I. STANDARD SPECIFICATIONS.
2. ANY NECESSARY ADJUSTMENTS DURING CONSTRUCTION WILL BE DONE BY SAW-CUTTING AND/OR CORING ONLY. NO JACKHAMMERS, HAMMERS AND CHISELS OR PNEUMATIC TOOLS WILL BE ALLOWED.
3. THE CENTERLINE OF THE OPENING MUST BE WITHIN 2'-0" FROM THE STEPS.
4. TOP SLAB, RISER AND BASE SECTIONS HAVE BEEN REINFORCED TO MEET OR EXCEED H-25 OR HS-25 LOADINGS WITH EARTH PRESSURES INCLUDED. THIS IMPLIES THAT THE TOP SLAB, RISER AND BASE SECTIONS ARE DESIGNED FOR AXLE LOAD OF NO GREATER THAN 20 TONS.
5. THERE IS TO BE 2" MINIMUM COVER ON ALL REBAR.
6. ALL REBARS ARE TO HAVE MINIMUM 2" CLEARANCE FROM OPENING.
7. STEPS SHALL CONFORM TO STD. 5.3.0 AND SHALL BE INSTALLED AT THE CASTING PLANT.
8. THE SPLICE LENGTHS ON TIES ARE TO BE A MINIMUM OF 1'-7".
9. WHERE THE CLEARANCE FROM THE TOP OF THE PIPE TO THE RIM IS "B" OR LESS, PLUGS SHALL BE USED IN CONJUNCTION WITH SLOTTED HOLES. NO SLOTTED HOLE WILL BE PERMITTED WHERE THE CLEARANCE IS GREATER THAN 8". IN CASES WHERE SLOTTED HOLES ARE NOT USED AND THE WALL OPENING COMES WITHIN 1'-3" OF THE RIM, AN ADDITIONAL #8 BAR SHALL BE USED ABOVE THE OPENING THE WIDTH "C" OF THE WALL.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

PRECAST 4'-0" OR 6'-0" SQUARE  
MANHOLE OR CATCH BASIN

REVISIONS		
NO.	BY	DATE

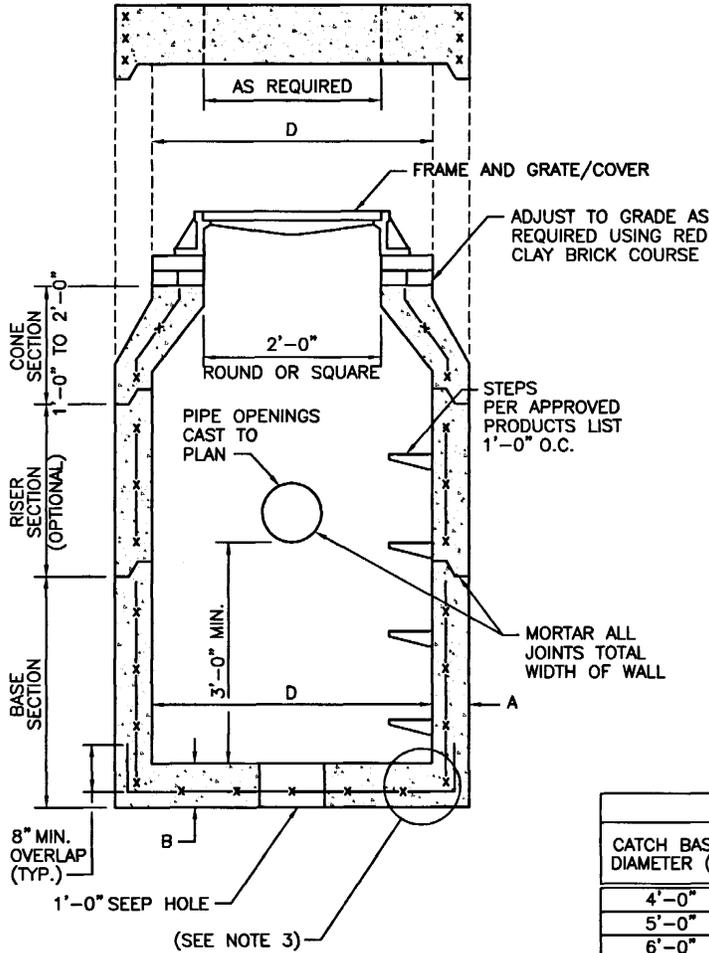
*James R. Gualdi*  
CHIEF ENGINEER  
TRANSPORTATION

*Edward J. Portier*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

JUNE 15, 1998  
ISSUE DATE

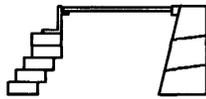


ALTERNATE TOP SLAB (SEE NOTES 10 AND 11)

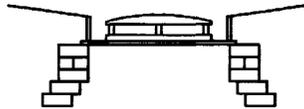


CATCH BASIN DIAMETER (D)	A	B	CIRCUMFERENTIAL STEEL REINFORCEMENT REQUIRED*
4'-0"	5"	6"	0.12 SQ. IN./LIN. FT.
5'-0"	6"	7"	0.15 SQ. IN./LIN. FT.
6'-0"	7"	8"	0.18 SQ. IN./LIN. FT.

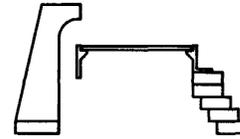
\* FOR LONGITUDINAL (VERTICAL STANDING) REINFORCEMENT REFER TO ASTM C478, ITEM 8.1.2



TYPE "D"



TYPE "R"



TYPE "F"

TYPE CATCH BASIN AS REQUIRED

NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION 702 OF THE R.I. STANDARD SPECIFICATIONS.
2. SEE TABLE 1 FOR STEEL REINFORCEMENT REQUIREMENTS.
3. STEEL REINFORCEMENT FOR BASE SECTION BOTTOM SHALL BE A MINIMUM OF 0.12 SQ. IN./LIN. FT. (BOTH WAYS).
4. STEPS SHALL CONFORM TO STD. 5.3.0 AND SHALL BE INSTALLED AT THE CASTING PLANT.
5. ONE POUR MONOLITHIC BASE SECTION.
6. ANY NECESSARY ADJUSTMENTS DURING CONSTRUCTION WILL BE DONE BY SAW-CUTTING AND/OR CORING ONLY. NO JACKHAMMERS, HAMMERS AND CHISELS OR PNEUMATIC TOOLS WILL BE ALLOWED.
7. CORBEL MADE OF RED CLAY BRICK WILL BE PERMITTED FOR THE "CONE SECTION" OF THE 4'-0" CATCH BASIN ONLY.
8. FOR CATCH BASIN TYPES "D" AND "F" STEPS MUST BE INSTALLED ON THE CURB SIDE OF THE STRUCTURE.
9. THE CENTERLINE OF THE OPENING MUST BE WITHIN 2'-0" FROM THE STEPS.
10. ALTERNATE TOP SLAB IS STEEL REINFORCED TO MEET OR EXCEED H-25 LOADING (SEE STD. 4.7.2).
11. ALTERNATE TOP SLAB IS ONLY FOR USE WHEN REDUCING SECTION DOES NOT FIT BECAUSE OF STRUCTURE DEPTH.
12. REFER TO STD. 5.2.0 FOR MAXIMUM PIPE SIZES.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE

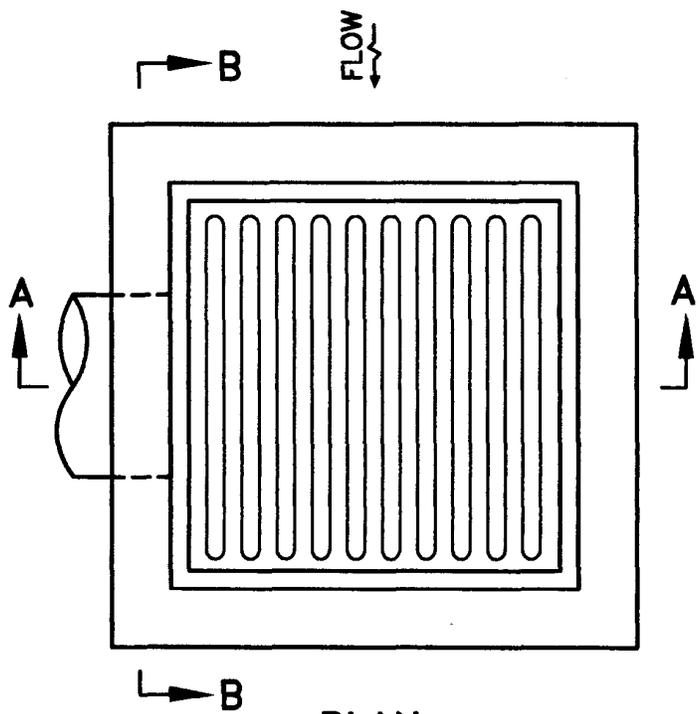
PRECAST 4'-0", 5'-0", OR 6'-0" ROUND CATCH BASIN

*James K. Gualdi*  
CHIEF ENGINEER  
TRANSPORTATION

*Edward P. Parker Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

JUNE 15, 1998  
ISSUE DATE

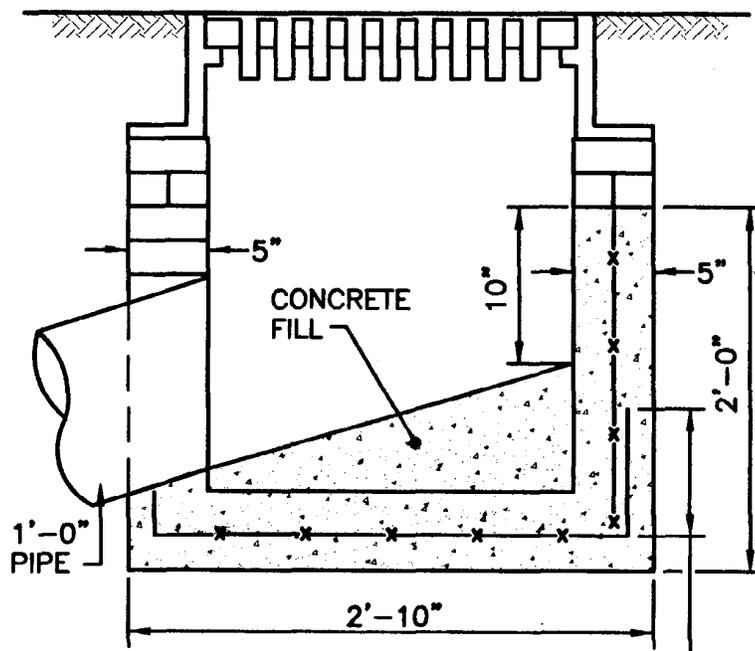




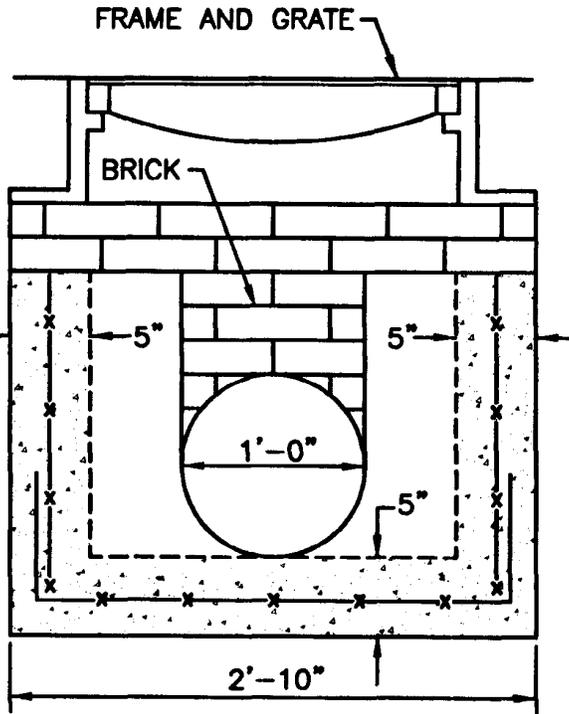
- NOTES:**
1. SHALL BE IN ACCORDANCE WITH SECTION 702 OF THE R.I. STANDARD SPECIFICATIONS.
  2. MINIMUM REQUIRED CONCRETE REINFORCEMENT = 0.12 SQ. IN./LIN. FT. (EACH WAY).
  3. MINIMUM COVER ON REINFORCEMENT SHALL BE 2".

CONCRETE TOLERANCES	
DIMENSION	TOLERANCE
0"-12"	1/4"
12"-24"	1/2"
24"-36"	3/4"

**PLAN**



**SECTION A-A**



**SECTION B-B**

**RHODE ISLAND DEPARTMENT OF TRANSPORTATION**

**PRECAST CONCRETE DROP INLET**

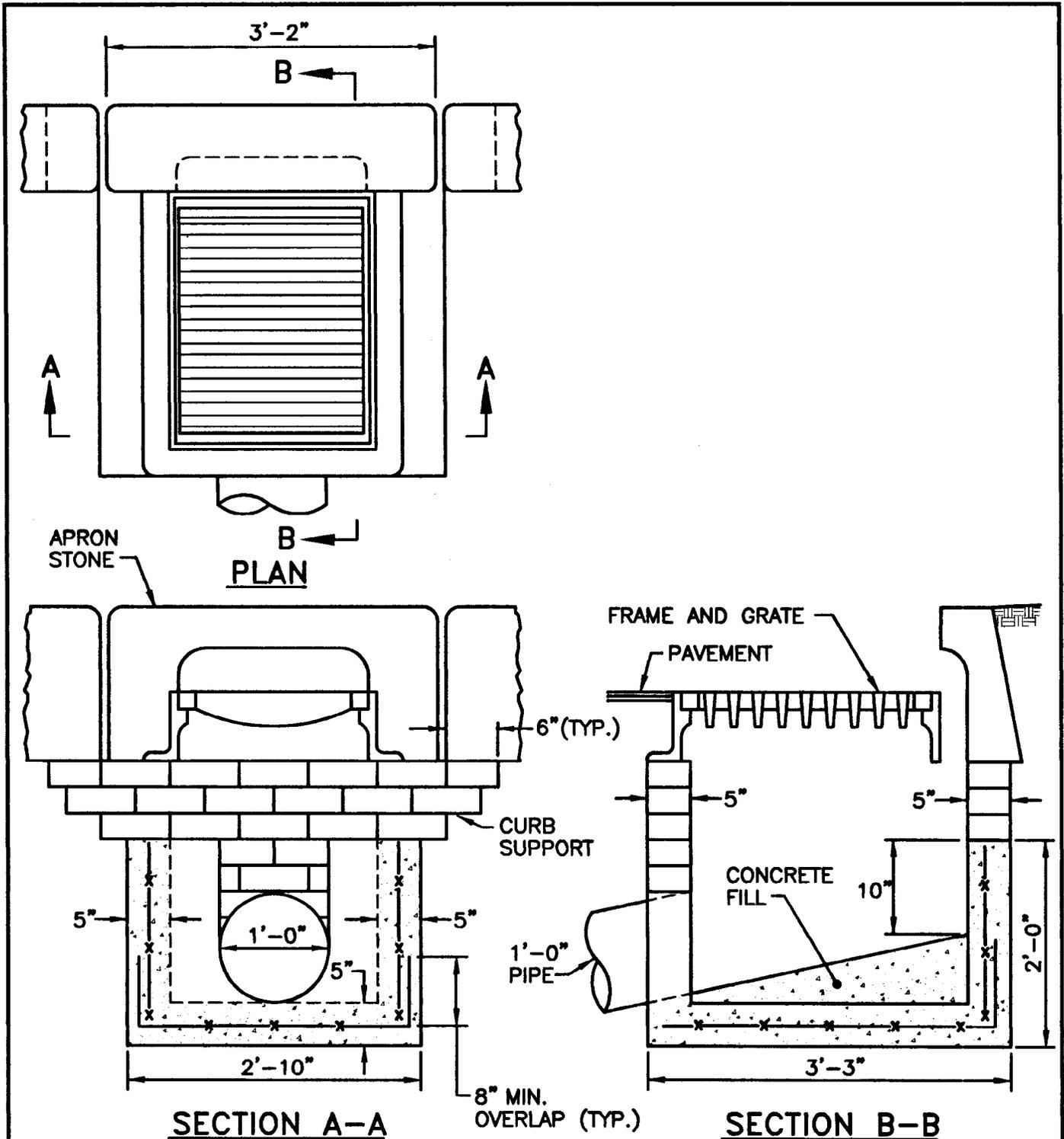
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NO.	BY	DATE

*Jean A. Capaldi*  
 CHIEF ENGINEER  
 TRANSPORTATION

*Edmund Parker Jr.*  
 CHIEF DESIGN ENGINEER  
 TRANSPORTATION

JUNE 15, 1998  
 ISSUE DATE





**NOTES:**

1. SHALL BE IN ACCORDANCE WITH SECTION 702 OF THE R.I. STANDARD SPECIFICATIONS.
2. MINIMUM REQUIRED CONCRETE REINFORCEMENT = 0.12 SQ. IN./LIN. FT. (EACH WAY).
3. MINIMUM COVER ON REINFORCEMENT SHALL BE 2".

**RHODE ISLAND DEPARTMENT OF TRANSPORTATION**

**PRECAST CONCRETE DROP INLET  
LATERAL OUTLET**

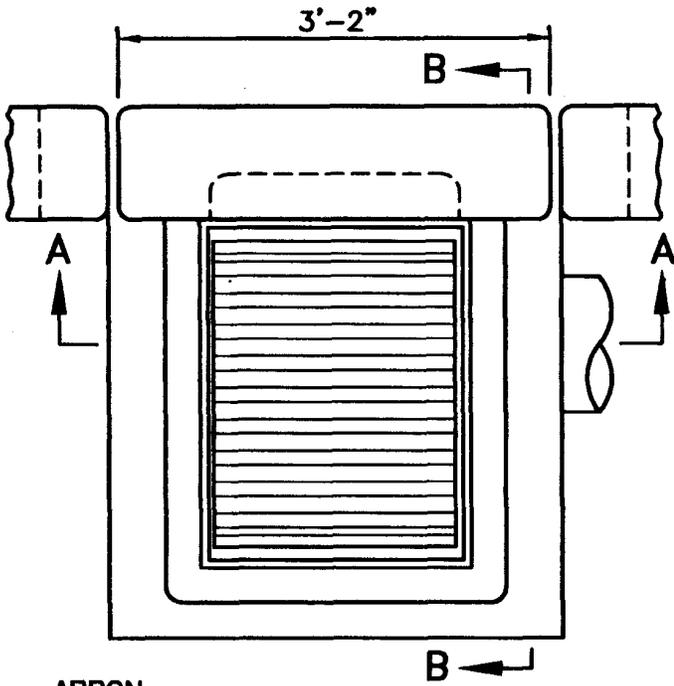
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*James H. Casaldi*  
CHIEF ENGINEER  
TRANSPORTATION

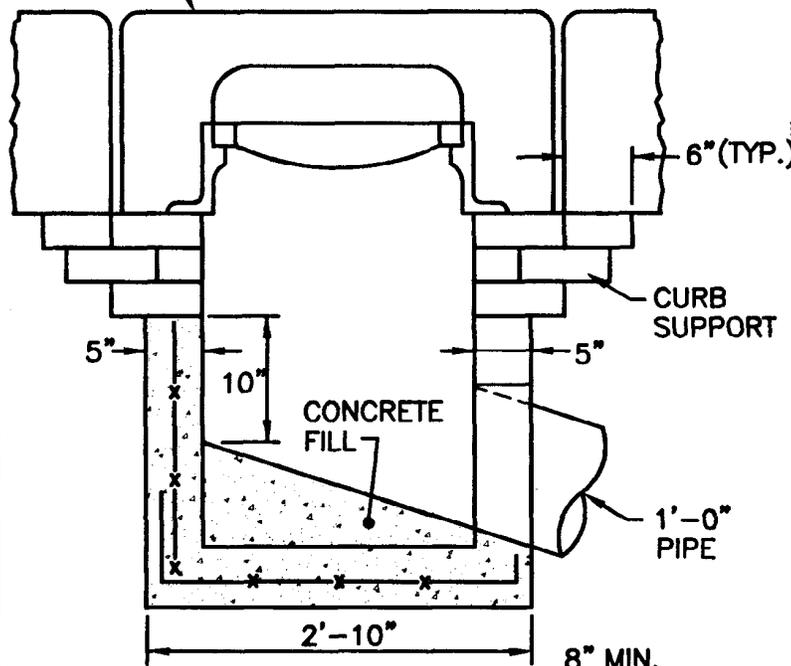
*Edmund J. Parker Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

JUNE 15, 1998  
ISSUE DATE

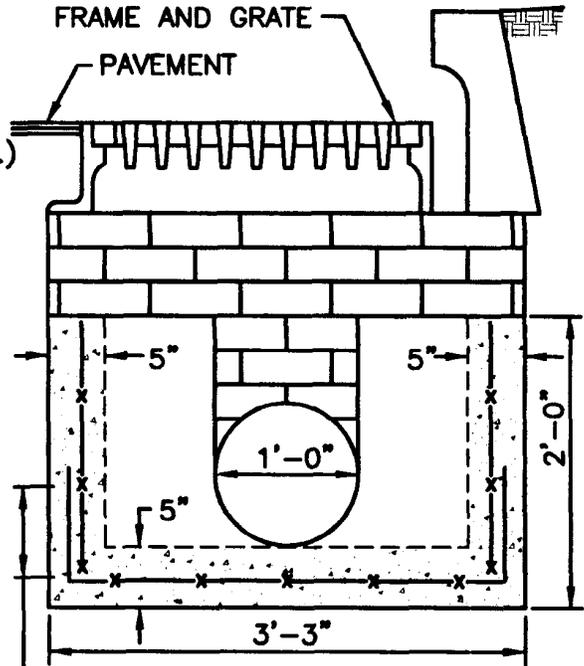




APRON STONE  
**PLAN**



**SECTION A-A**



**SECTION B-B**

**NOTES:**

1. SHALL BE IN ACCORDANCE WITH SECTION 702 OF THE R.I. STANDARD SPECIFICATIONS.
2. MINIMUM REQUIRED CONCRETE REINFORCEMENT = 0.12 SQ. IN./LIN. FT. (EACH WAY).
3. MINIMUM COVER ON REINFORCEMENT SHALL BE 2".

**RHODE ISLAND DEPARTMENT OF TRANSPORTATION**

**PRECAST CONCRETE DROP INLET  
LONGITUDINAL OUTLET**

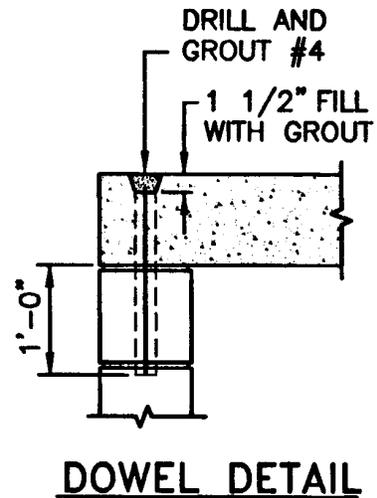
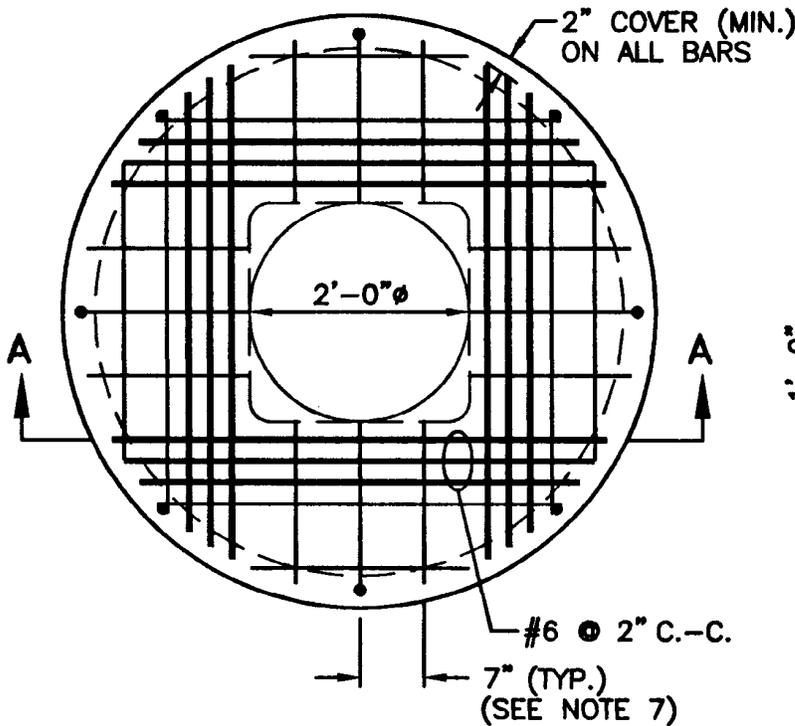
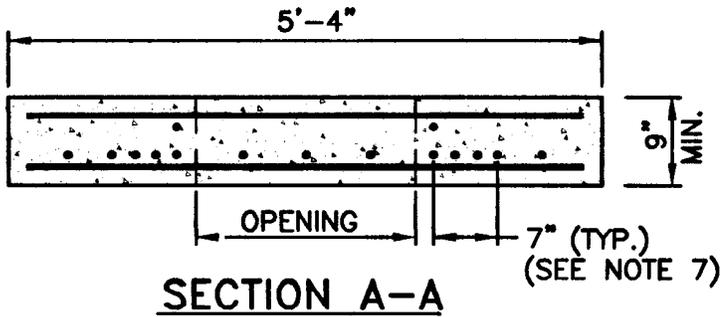
REVISIONS		
NO.	BY	DATE

*James H. Capaldi*  
CHIEF ENGINEER  
TRANSPORTATION

*Edmund Parker Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

**JUNE 15, 1998**  
ISSUE DATE





**PLAN**

**DOWEL DETAIL**

**NOTES:**

1. SHALL BE IN ACCORDANCE WITH SECTION 702 OF THE R.I. STANDARD SPECIFICATIONS.
2. THE CENTERLINE OF THE OPENING MUST BE WITHIN 2'-0" FROM THE STEPS.
3. TOP SLAB HAS BEEN REINFORCED TO MEET OR EXCEED H-25 OR HS-25 LOADINGS WITH EARTH PRESSURES INCLUDED. THIS IMPLIES THAT THE TOP SLAB IS DESIGNED FOR AXLE LOADS OF NO MORE THAN 20 TONS.
4. ALL REBARS ARE TO HAVE A MINIMUM 2" CLEARANCE FROM OPENING.
5. PRECAST SECTION SHALL BE LIFTED USING APPROVED LIFTING LUGS LOCATED SUCH THAT NO DAMAGE TO THE SLAB OCCURS.
6. DOWEL HOLES IN COVER TO BE FORMED OR CORED BY THE FABRICATOR.
7. ALL REBARS IN THE BOTTOM MAT ARE #5 @ 7", BOTH WAYS, WITH 2" MINIMUM COVER, EXCEPT FOR REBARS ADJACENT TO THE OPENING. THESE REBARS SHALL BE #6 (SHOWN WITH HEAVIER LINE FOR CLARITY). REBARS IN THE TOP MAT ARE #6 BARS PLACED ADJACENT TO THE OPENING, BOTH WAYS, WITH 2" MINIMUM COVER.

**RHODE ISLAND DEPARTMENT OF TRANSPORTATION**

**CONCRETE COVER FOR SHALLOW  
4'-0" ROUND MANHOLES**

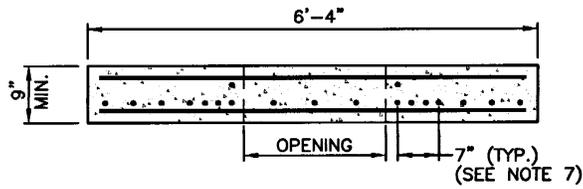
REVISIONS		
NO.	BY	DATE

*James A. Casabelli*  
CHIEF ENGINEER  
TRANSPORTATION

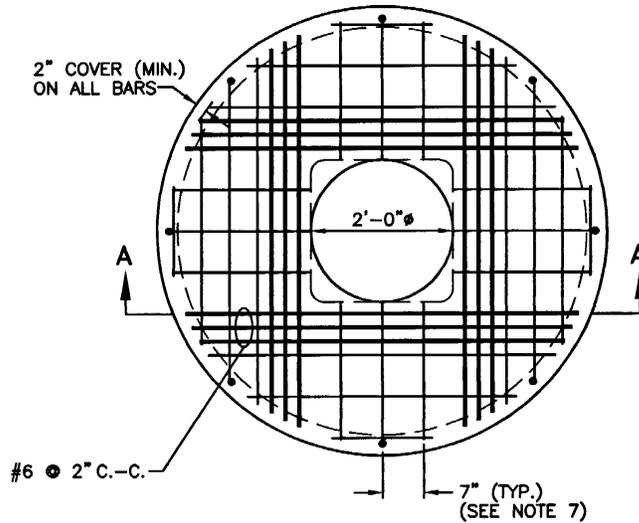
*Edmund Parker Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

JUNE 15, 1998  
ISSUE DATE

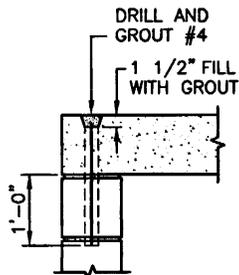




SECTION A-A



PLAN



DOWEL DETAIL

**NOTES:**

1. SHALL BE IN ACCORDANCE WITH SECTION 702 OF THE R.I. STANDARD SPECIFICATIONS.
2. THE CENTERLINE OF THE OPENING MUST BE WITHIN 2'-0" FROM THE STEPS.
3. TOP SLAB HAS BEEN REINFORCED TO MEET OR EXCEED H-25 OR HS-25 LOADINGS WITH EARTH PRESSURES INCLUDED. THIS IMPLIES THAT THE TOP SLAB IS DESIGNED FOR AXLE LOADS OF NO MORE THAN 20 TONS.
4. ALL REBARS ARE TO HAVE A MINIMUM 2" CLEARANCE FROM OPENING.
5. PRECAST SECTION SHALL BE LIFTED USING APPROVED LIFTING LUGS LOCATED SUCH THAT NO DAMAGE TO THE SLAB OCCURS.
6. DOWEL HOLES IN COVER TO BE FORMED OR CORED BY THE FABRICATOR.
7. ALL REBARS IN THE BOTTOM MAT ARE #5 @ 7", BOTH WAYS, WITH 2" MINIMUM COVER, EXCEPT FOR REBARS ADJACENT TO THE OPENING. THESE REBARS SHALL BE #6 (SHOWN WITH HEAVIER LINE FOR CLARITY). REBARS IN THE TOP MAT ARE #6 BARS PLACED ADJACENT TO THE OPENING, BOTH WAYS, WITH 2" MINIMUM COVER.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE

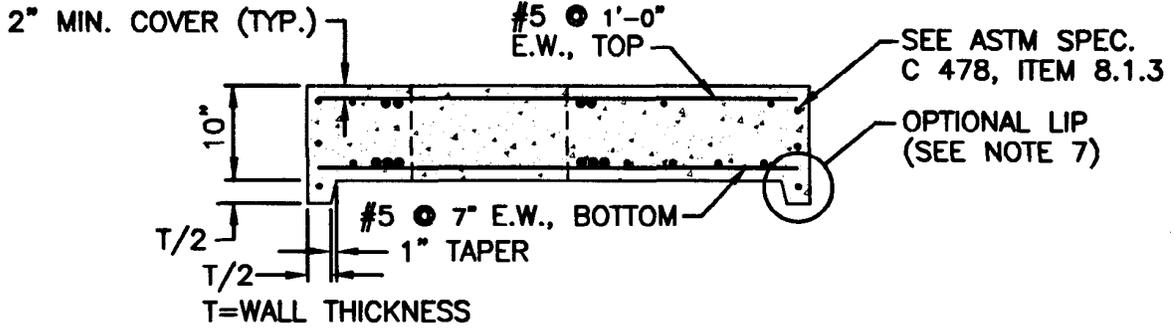
CONCRETE COVER FOR SHALLOW 5'-0" ROUND MANHOLES

*James A. Gagliardi*  
CHIEF ENGINEER  
TRANSPORTATION

*Edward J. Parker*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

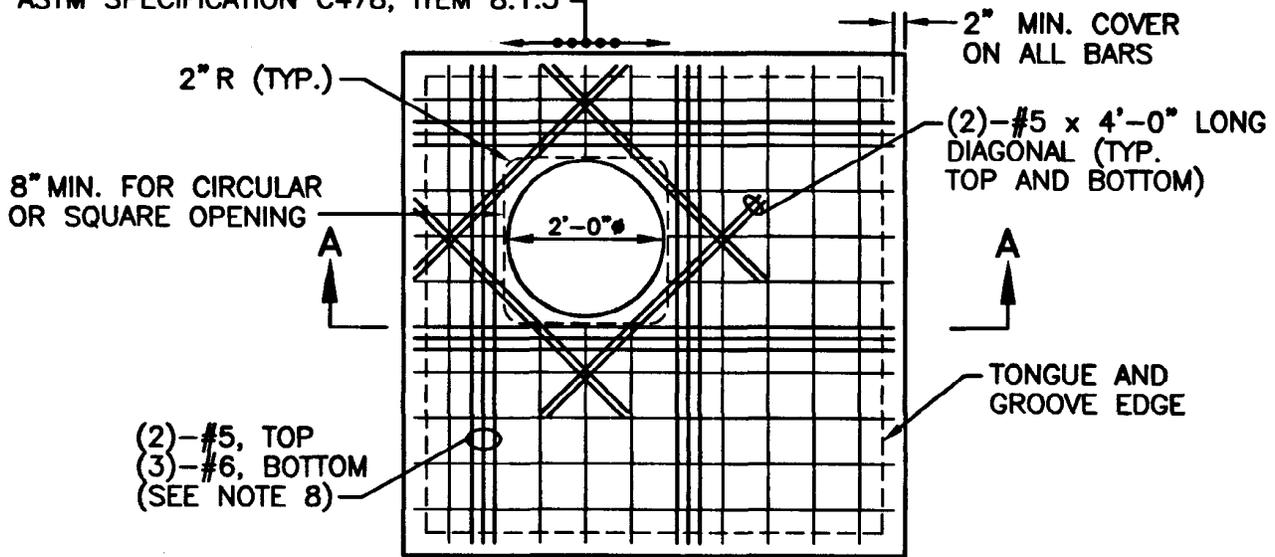
JUNE 15, 1998  
ISSUE DATE





**SECTION A-A**

ASTM SPECIFICATION C478, ITEM 8.1.3



**PLAN**

**NOTES:**

1. SHALL BE IN ACCORDANCE WITH SECTION 702 OF THE R.I. STANDARD SPECIFICATIONS.
2. THIS TOP COVER IS FOR STD. 4.3.0.
3. ANY NECESSARY ADJUSTMENTS DURING CONSTRUCTION WILL BE DONE BY SAW-CUTTING AND/OR CORING ONLY. NO JACKHAMMERS, HAMMERS AND CHISELS OR PNEUMATIC TOOLS WILL BE ALLOWED.
4. THE CENTERLINE OF THE OPENING MUST BE WITHIN 2'-0" FROM THE STEPS.
5. TOP SLAB HAS BEEN REINFORCED TO MEET OR EXCEED H-25 OR HS-25 LOADINGS WITH EARTH PRESSURES INCLUDED. THIS IMPLIES THAT THE TOP SLAB IS DESIGNED FOR AXLE LOADS OF NO MORE THAN 20 TONS.
6. ALL REBARS ARE TO HAVE A MINIMUM 2" CLEARANCE FROM OPENING.
7. WHERE NO LIP IS PROVIDED, THE ASTM SPECIFICATION REFERENCE SHALL BE IGNORED. IN ALL CASES, THE CONTACT SURFACES SHALL MATCH.
8. ALL REBARS IN THE BOTTOM MAT ARE #5 @ 7" BOTH WAYS WITH 2" MINIMUM COVER, EXCEPT FOR BARS ADJACENT TO THE OPENING. THESE BARS SHALL BE (3)-#6 (SHOWN WITH HEAVIER LINE FOR CLARITY). REBARS IN THE TOP MAT ARE #5 @ 1'-0" BOTH WAYS WITH 2" MINIMUM COVER, EXCEPT FOR BARS ADJACENT TO THE OPENING. THESE BARS SHALL BE (2)-#5 BARS.
9. FOR DOUBLE GRATE OPENINGS, THE REBARS SURROUNDING THE OPENING IN THE BOTTOM MAT SHALL BE #7 BARS.

**RHODE ISLAND DEPARTMENT OF TRANSPORTATION**

REVISIONS		
NO.	BY	DATE

**TOP COVER FOR 4'-0" OR 6'-0" SQUARE CATCH BASINS AND MANHOLES**

*James H. Capaldi*  
CHIEF ENGINEER  
TRANSPORTATION

*Edmund J. Parker Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

**JUNE 15, 1998**  
ISSUE DATE

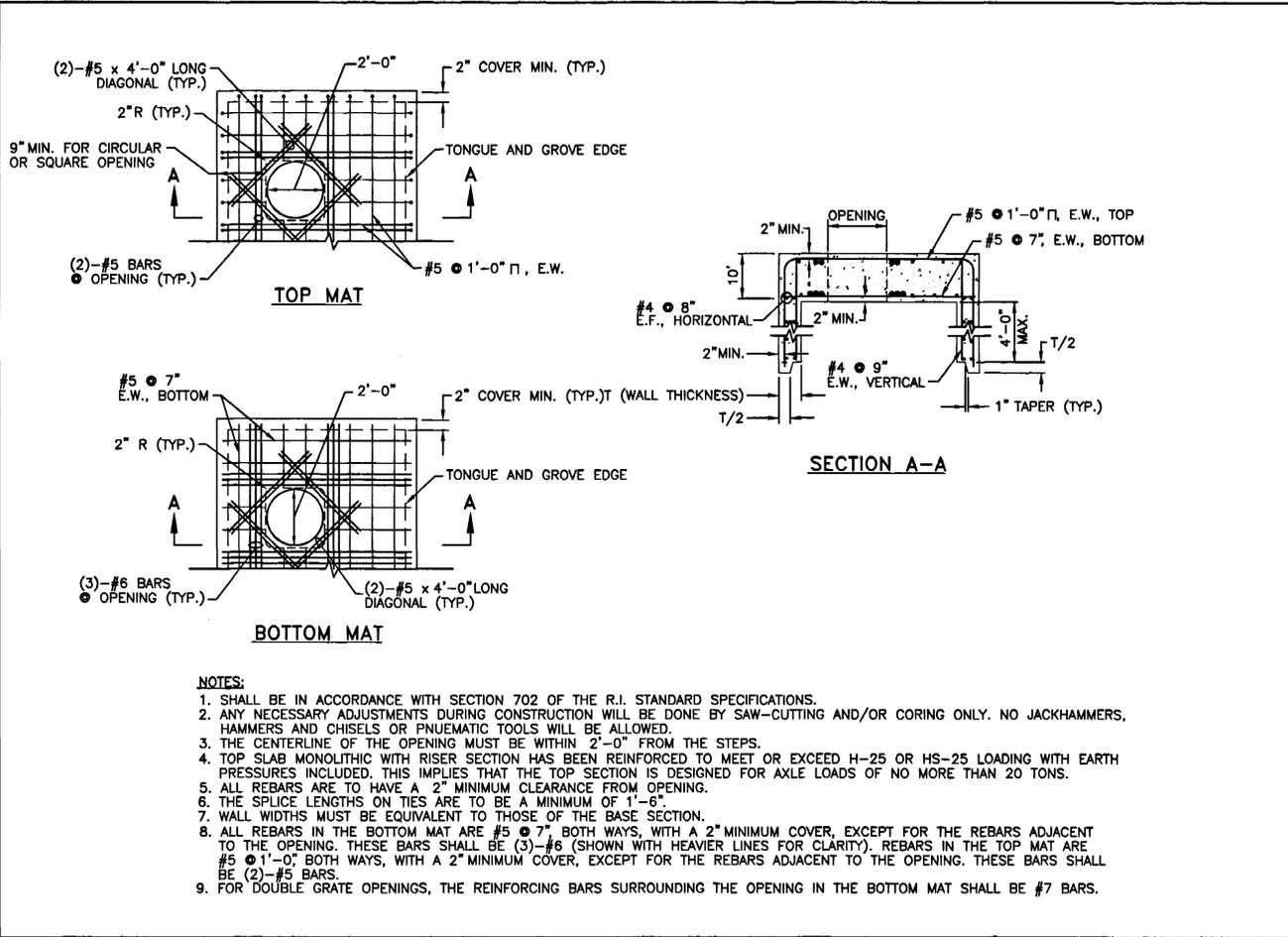


TOP COVER MONOLITHIC WITH RISER SECTION FOR 4'-0" OR 6'-0" SQUARE CATCH BASINS AND MANHOLES

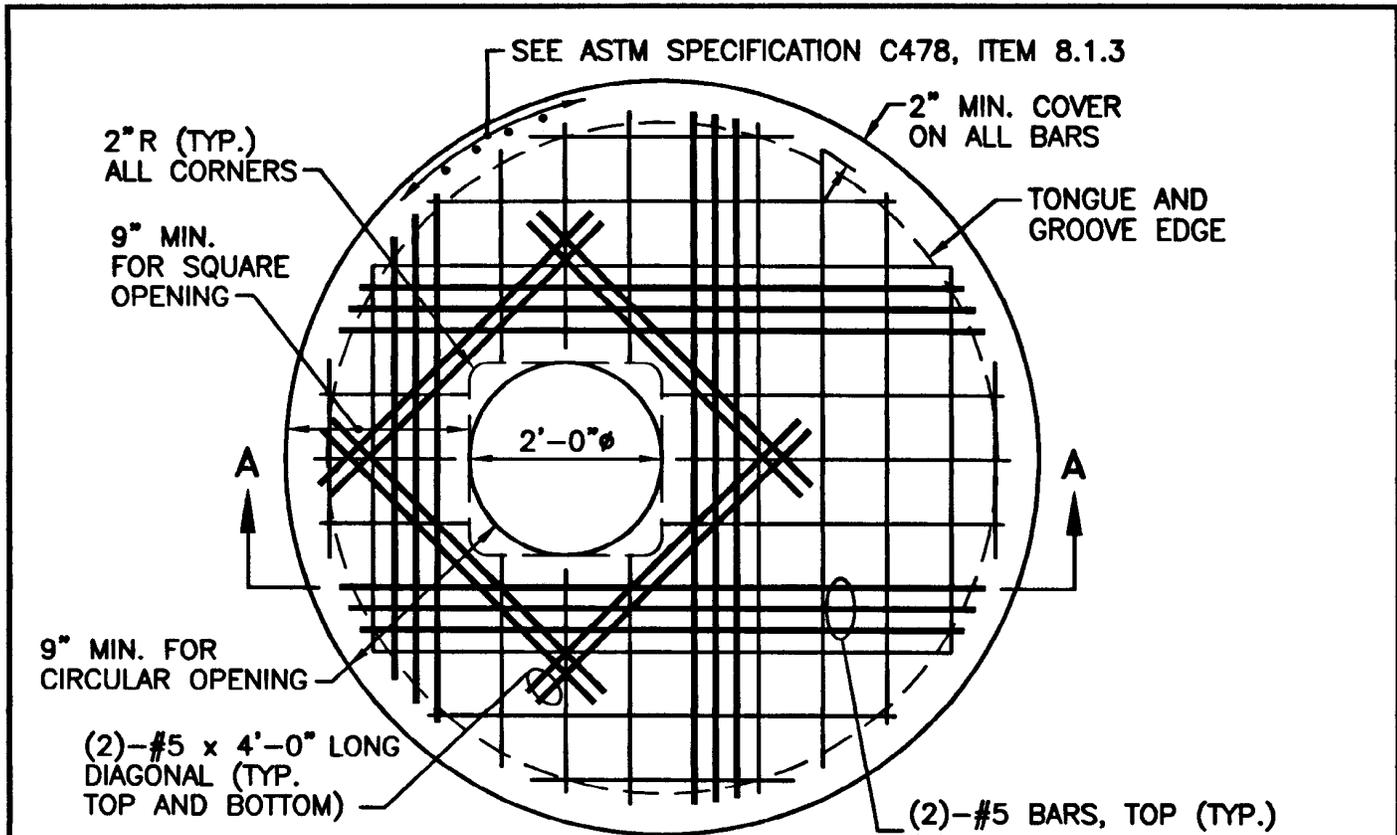
*John J. Gaudin*  
CHIEF ENGINEER  
DEPARTMENT OF TRANSPORTATION

*John J. Gaudin*  
CHIEF ENGINEER  
DEPARTMENT OF TRANSPORTATION

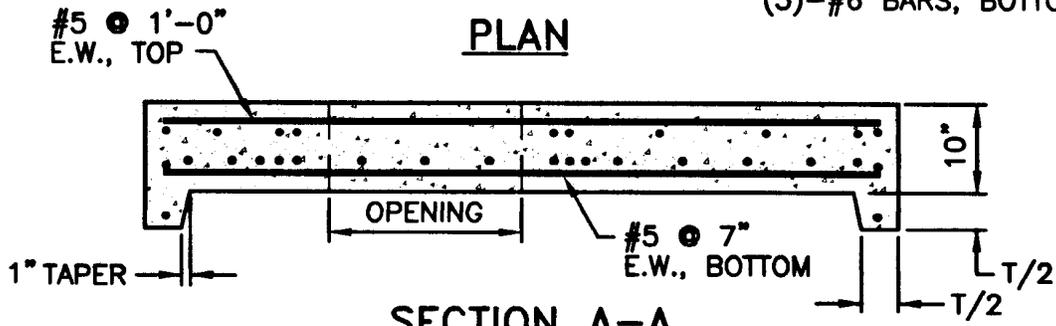
REVISIONS	
NO.	DATE



- NOTES:**
1. SHALL BE IN ACCORDANCE WITH SECTION 702 OF THE R.I. STANDARD SPECIFICATIONS.
  2. ANY NECESSARY ADJUSTMENTS DURING CONSTRUCTION WILL BE DONE BY SAW-CUTTING AND/OR CORING ONLY. NO JACKHAMMERS, HAMMERS AND CHISELS OR PNEUMATIC TOOLS WILL BE ALLOWED.
  3. THE CENTERLINE OF THE OPENING MUST BE WITHIN 2'-0" FROM THE STEPS.
  4. TOP SLAB MONOLITHIC WITH RISER SECTION HAS BEEN REINFORCED TO MEET OR EXCEED H-25 OR HS-25 LOADING WITH EARTH PRESSURES INCLUDED. THIS IMPLIES THAT THE TOP SECTION IS DESIGNED FOR AXLE LOADS OF NO MORE THAN 20 TONS.
  5. ALL REBARS ARE TO HAVE A 2" MINIMUM CLEARANCE FROM OPENING.
  6. THE SPLICE LENGTHS ON TIES ARE TO BE A MINIMUM OF 1'-6".
  7. WALL WIDTHS MUST BE EQUIVALENT TO THOSE OF THE BASE SECTION.
  8. ALL REBARS IN THE BOTTOM MAT ARE #5 @ 7" BOTH WAYS, WITH A 2" MINIMUM COVER, EXCEPT FOR THE REBARS ADJACENT TO THE OPENING. THESE BARS SHALL BE (3)-#6 (SHOWN WITH HEAVIER LINES FOR CLARITY). REBARS IN THE TOP MAT ARE #5 @ 1'-0", BOTH WAYS, WITH A 2" MINIMUM COVER, EXCEPT FOR THE REBARS ADJACENT TO THE OPENING. THESE BARS SHALL BE (2)-#5 BARS.
  9. FOR DOUBLE GRATE OPENINGS, THE REINFORCING BARS SURROUNDING THE OPENING IN THE BOTTOM MAT SHALL BE #7 BARS.



**PLAN**



**SECTION A-A**

T=WALL THICKNESS

**NOTES:**

1. SHALL BE IN ACCORDANCE WITH SECTION 702 OF THE R.I. STANDARD SPECIFICATIONS.
2. ANY NECESSARY ADJUSTMENTS DURING CONSTRUCTION WILL BE DONE BY SAW-CUTTING AND/OR CORING ONLY. NO JACKHAMMERS, HAMMERS AND CHISELS OR PNEUMATIC TOOLS WILL BE ALLOWED.
3. THE CENTER LINE OF THE OPENING MUST BE WITHIN 2" FROM THE STEPS.
4. ALTERNATE TOP COVER IS STEEL REINFORCED TO MEET OR EXCEED H-25 OR HS-25 LOADINGS WITH EARTH PRESSURES INCLUDED. THIS IMPLIES THAT THE TOP SLAB IS DESIGNED FOR AXLE LOADS OF NO MORE THAN 20 TONS.
5. ALL REBAR SHALL HAVE A MINIMUM OF 2" CLEARANCE FROM OPENING.
6. ALL REBARS IN THE BOTTOM MAT ARE #5 @ 2", BOTH WAYS, WITH 2" MINIMUM COVER, EXCEPT FOR REBARS ADJACENT TO THE OPENING. THESE BARS SHALL BE (3)-#6 SHOWN WITH A HEAVIER LINE FOR CLARITY). REBARS IN THE TOP MAT ARE #5 @ 1'-0", BOTH WAYS, WITH 2" MINIMUM COVER, EXCEPT FOR REBARS ADJACENT TO THE OPENING. THESE BARS SHALL BE (2)-#5 BARS.

**RHODE ISLAND DEPARTMENT OF TRANSPORTATION**

REVISIONS		
NO.	BY	DATE

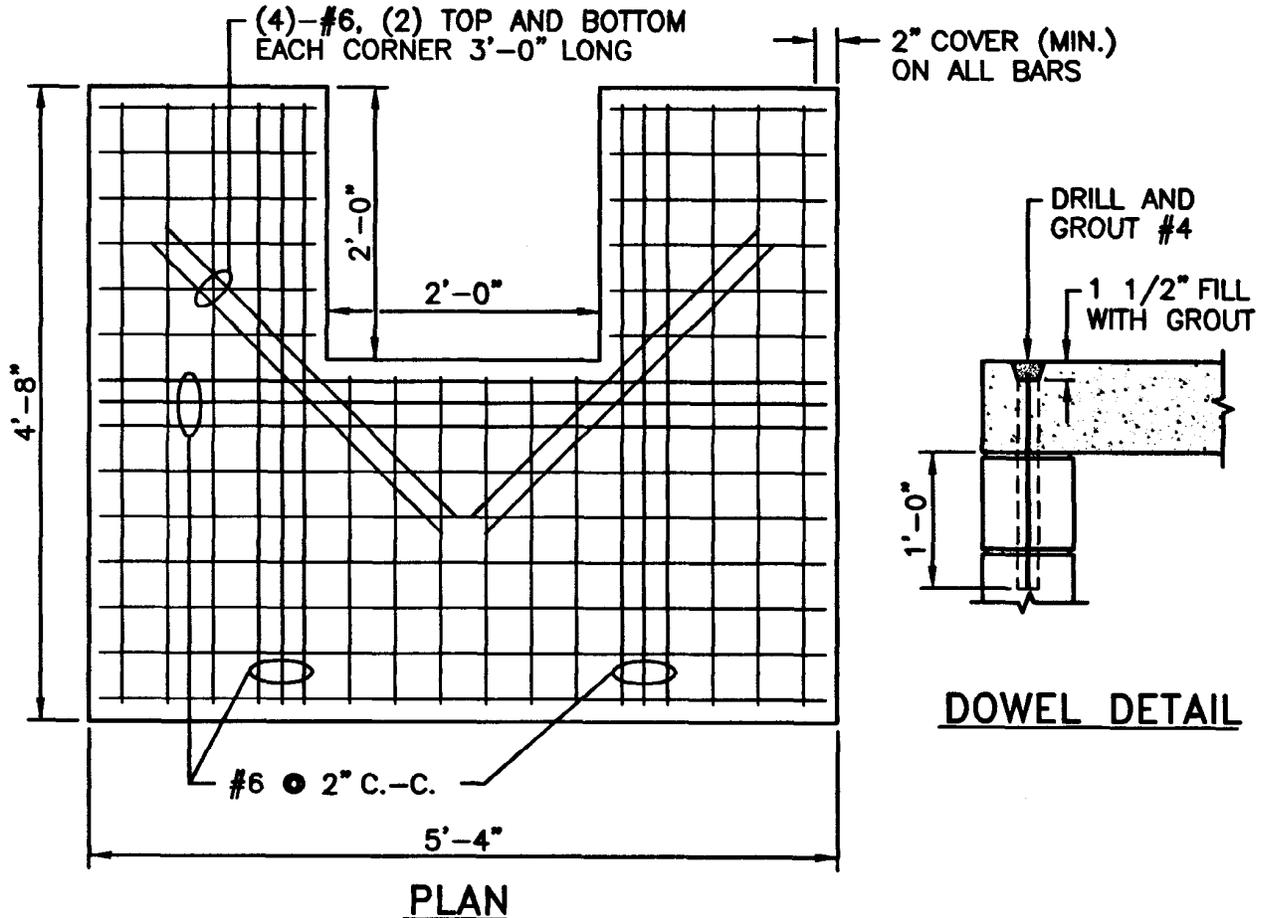
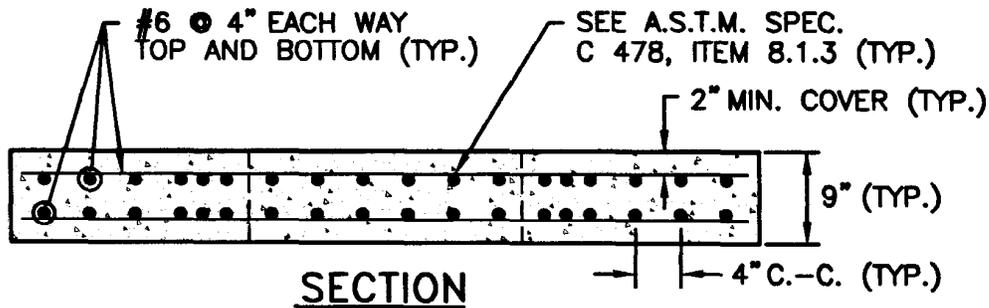
**ALTERNATE TOP COVER FOR ROUND PRECAST MANHOLES AND CATCH BASINS**

*John A. Capaldi*  
 CHIEF ENGINEER  
 TRANSPORTATION

*Edward J. Parker Jr.*  
 CHIEF DESIGN ENGINEER  
 TRANSPORTATION

JUNE 15, 1998  
 ISSUE DATE





**NOTES:**

1. SHALL BE IN ACCORDANCE WITH SECTION 702 OF THE R.I. STANDARD SPECIFICATIONS.
2. THE CENTERLINE OF THE OPENING MUST BE WITHIN 2'-0" FROM THE STEPS.
3. TOP SLAB HAS BEEN REINFORCED TO MEET OR EXCEED H-25 OR HS-25 LOADINGS WITH EARTH PRESSURES INCLUDED. THIS IMPLIES THAT THE TOP SLAB IS DESIGNED FOR AXLE LOADS OF NO MORE THAN 20 TONS.
4. ALL REBARS ARE TO HAVE A MINIMUM 2" CLEARANCE FROM OPENING.
5. PRECAST SECTION SHALL BE LIFTED USING APPROVED LIFTING LUGS LOCATED SUCH THAT NO DAMAGE TO THE SLAB OCCURS.
6. DOWEL HOLES IN COVER TO BE FORMED OR CORED BY THE FABRICATOR.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE

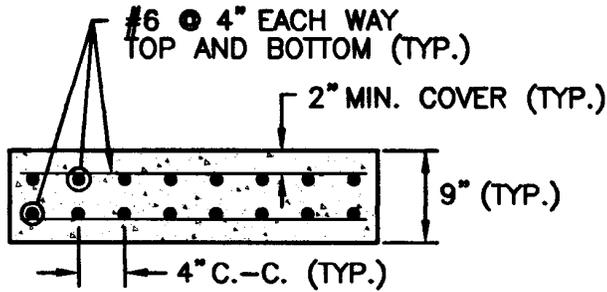
CONCRETE COVER FOR SHALLOW  
TYPE "F" SQUARE CATCH BASINS

*James H. Gualdi*  
CHIEF ENGINEER  
TRANSPORTATION

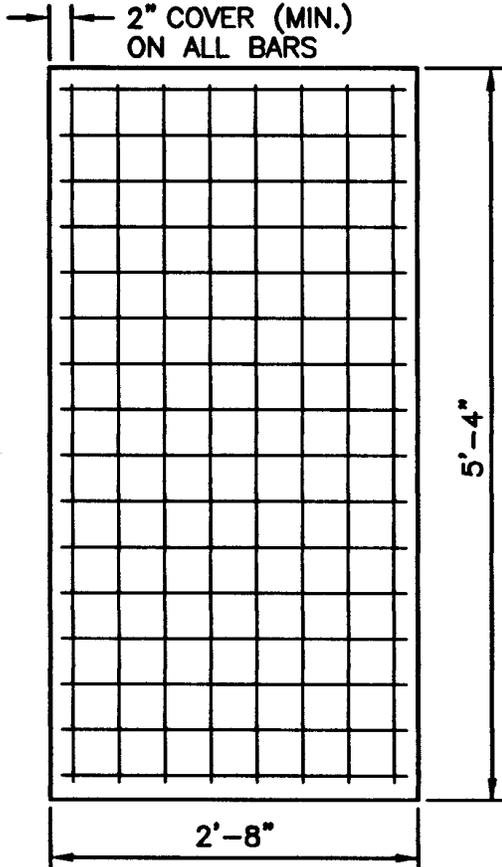
*Edmund J. Parker Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

JUNE 15, 1998  
ISSUE DATE

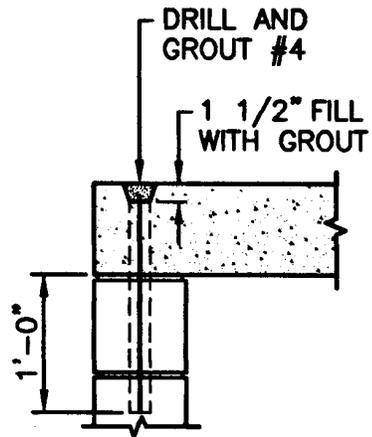




**SECTION**



**PLAN**



**DOWEL DETAIL**

**NOTES:**

1. SHALL BE IN ACCORDANCE WITH SECTION 702 OF THE R.I. STANDARD SPECIFICATIONS.
2. THE CENTERLINE OF THE OPENING MUST BE WITHIN 2'-0" FROM THE STEPS.
3. TOP SLAB HAS BEEN REINFORCED TO MEET OR EXCEED H-25 OR HS-25 LOADINGS WITH EARTH PRESSURES INCLUDED. THIS IMPLIES THAT THE TOP SLAB IS DESIGNED FOR AXLE LOADS OF NO MORE THAN 20 TONS.
4. ALL REBARS ARE TO HAVE A MINIMUM 2" CLEARANCE FROM OPENING.
5. PRECAST SECTION SHALL BE LIFTED USING APPROVED LIFTING LUGS LOCATED SUCH THAT NO DAMAGE TO THE SLAB OCCURS.
6. DOWEL HOLES IN COVER TO BE FORMED OR CORED BY THE FABRICATOR.

**RHODE ISLAND DEPARTMENT OF TRANSPORTATION**

REVISIONS		
NO.	BY	DATE

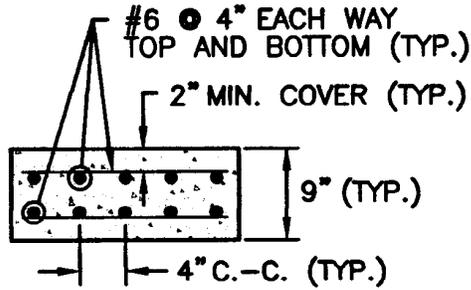
**CONCRETE COVER FOR SHALLOW DOUBLE  
GRATE CATCH BASINS WITH CURB**

*James H. Caselli*  
CHIEF ENGINEER  
TRANSPORTATION

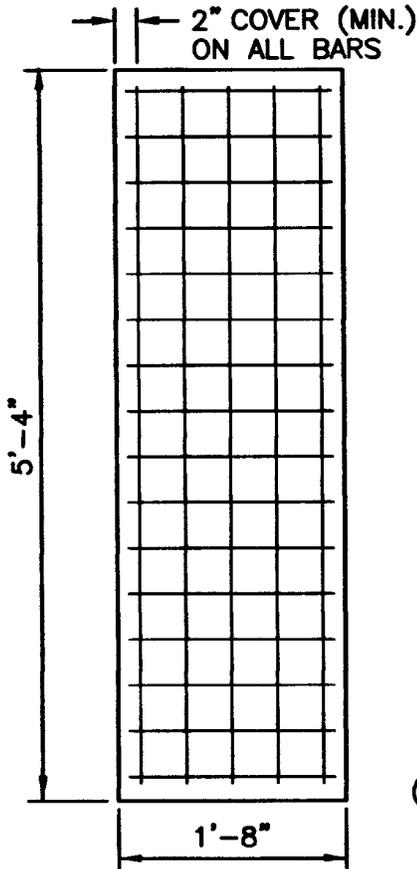
*Edmund J. Parker Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

JUNE 15, 1998  
ISSUE DATE

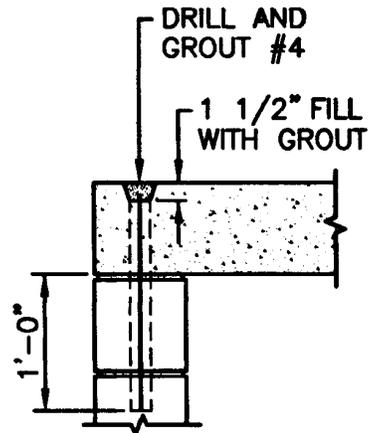




**SECTION**



**PLAN**



**DOWEL DETAIL**

(TWO REQUIRED FOR EACH CATCH BASIN)

**NOTES:**

1. SHALL BE IN ACCORDANCE WITH SECTION 702 OF THE R.I. STANDARD SPECIFICATIONS.
2. THE CENTERLINE OF THE OPENING MUST BE WITHIN 2'-0" FROM THE STEPS.
3. TOP SLAB HAS BEEN REINFORCED TO MEET OR EXCEED H-25 OR HS-25 LOADINGS WITH EARTH PRESSURES INCLUDED. THIS IMPLIES THAT THE TOP SLAB IS DESIGNED FOR AXLE LOADS OF NO MORE THAN 20 TONS.
4. ALL REBARS ARE TO HAVE A MINIMUM 2" CLEARANCE FROM OPENING.
5. PRECAST SECTION SHALL BE LIFTED USING APPROVED LIFTING LUGS LOCATED SUCH THAT NO DAMAGE TO THE SLAB OCCURS.
6. DOWEL HOLES IN COVER TO BE FORMED OR CORED BY THE FABRICATOR.

**RHODE ISLAND DEPARTMENT OF TRANSPORTATION**

REVISIONS		
NO.	BY	DATE

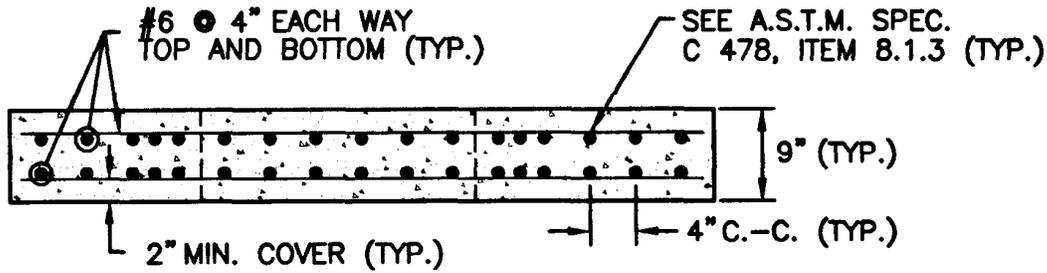
**CONCRETE COVER FOR SHALLOW DOUBLE  
GRATE CATCH BASINS WITHOUT CURB**

*James H. Capaldi*  
CHIEF ENGINEER  
TRANSPORTATION

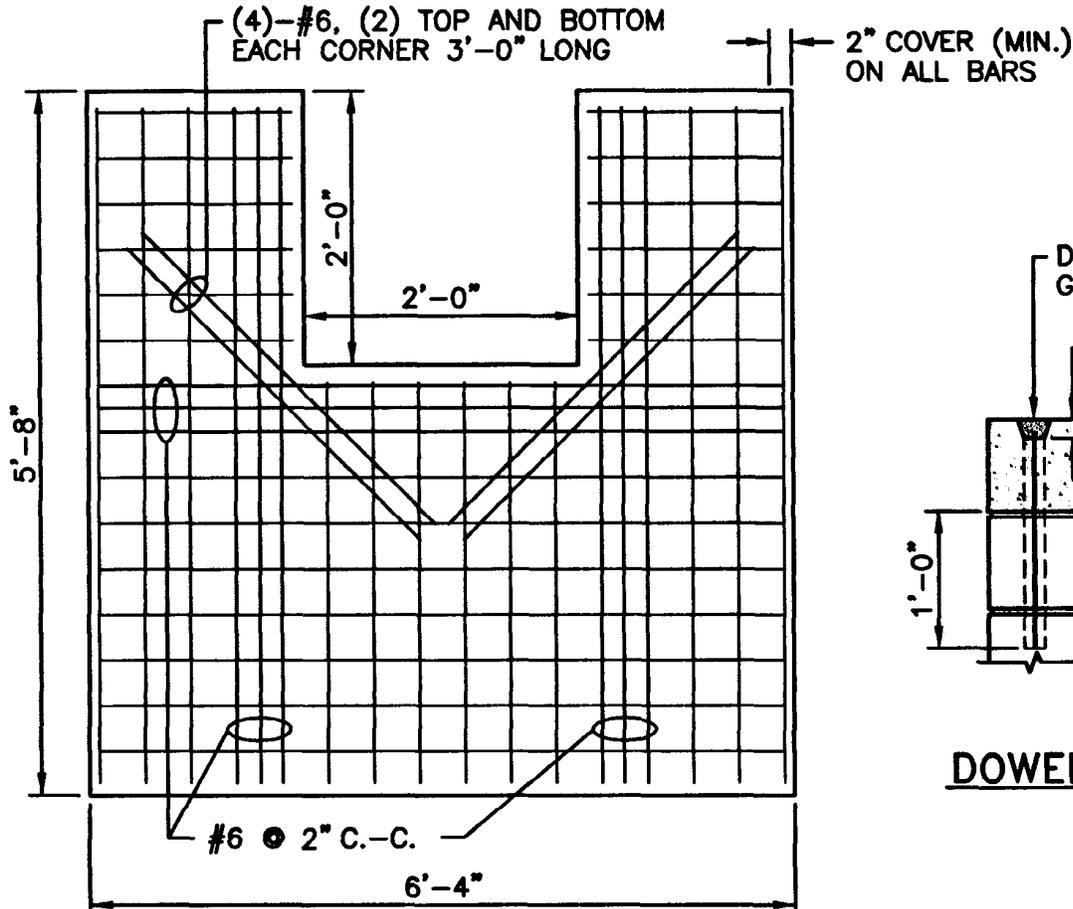
*Edmund J. Parker Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

JUNE 15, 1998  
ISSUE DATE

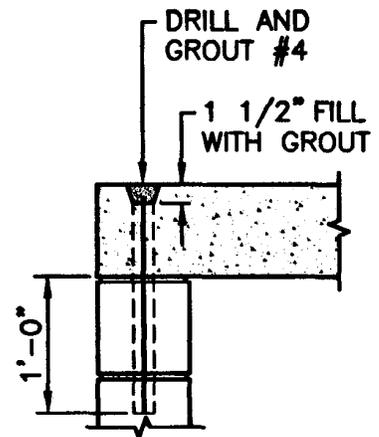




**SECTION**



**PLAN**



**DOWEL DETAIL**

**NOTES:**

1. SHALL BE IN ACCORDANCE WITH SECTION 702 OF THE R.I. STANDARD SPECIFICATIONS.
2. THE CENTERLINE OF THE OPENING MUST BE WITHIN 2'-0" FROM THE STEPS.
3. TOP SLAB HAS BEEN REINFORCED TO MEET OR EXCEED H-25 OR HS-25 LOADINGS WITH EARTH PRESSURES INCLUDED. THIS IMPLIES THAT THE TOP SLAB IS DESIGNED FOR AXLE LOADS NO GREATER THAN 20 TONS.
4. ALL REBARS ARE TO HAVE A MINIMUM 2" CLEARANCE FROM OPENING.
5. PRECAST SECTION SHALL BE LIFTED USING APPROVED LIFTING LUGS LOCATED SUCH THAT NO DAMAGE TO THE SLAB OCCURS.
6. DOWEL HOLES IN COVER TO BE FORMED OR CORED BY THE FABRICATOR.

**RHODE ISLAND DEPARTMENT OF TRANSPORTATION**

**CONCRETE COVER FOR SHALLOW  
5'-0" SQUARE CATCH BASINS**

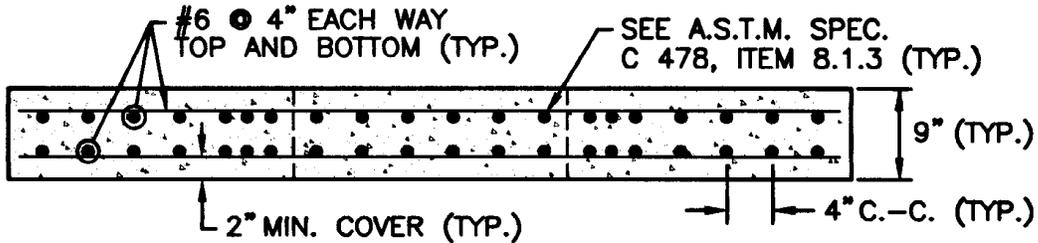
REVISIONS		
NO.	BY	DATE

*James A. Casella*  
CHIEF ENGINEER  
TRANSPORTATION

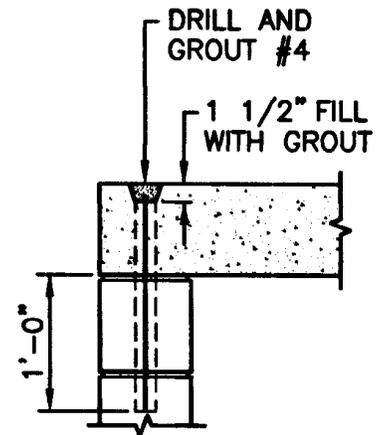
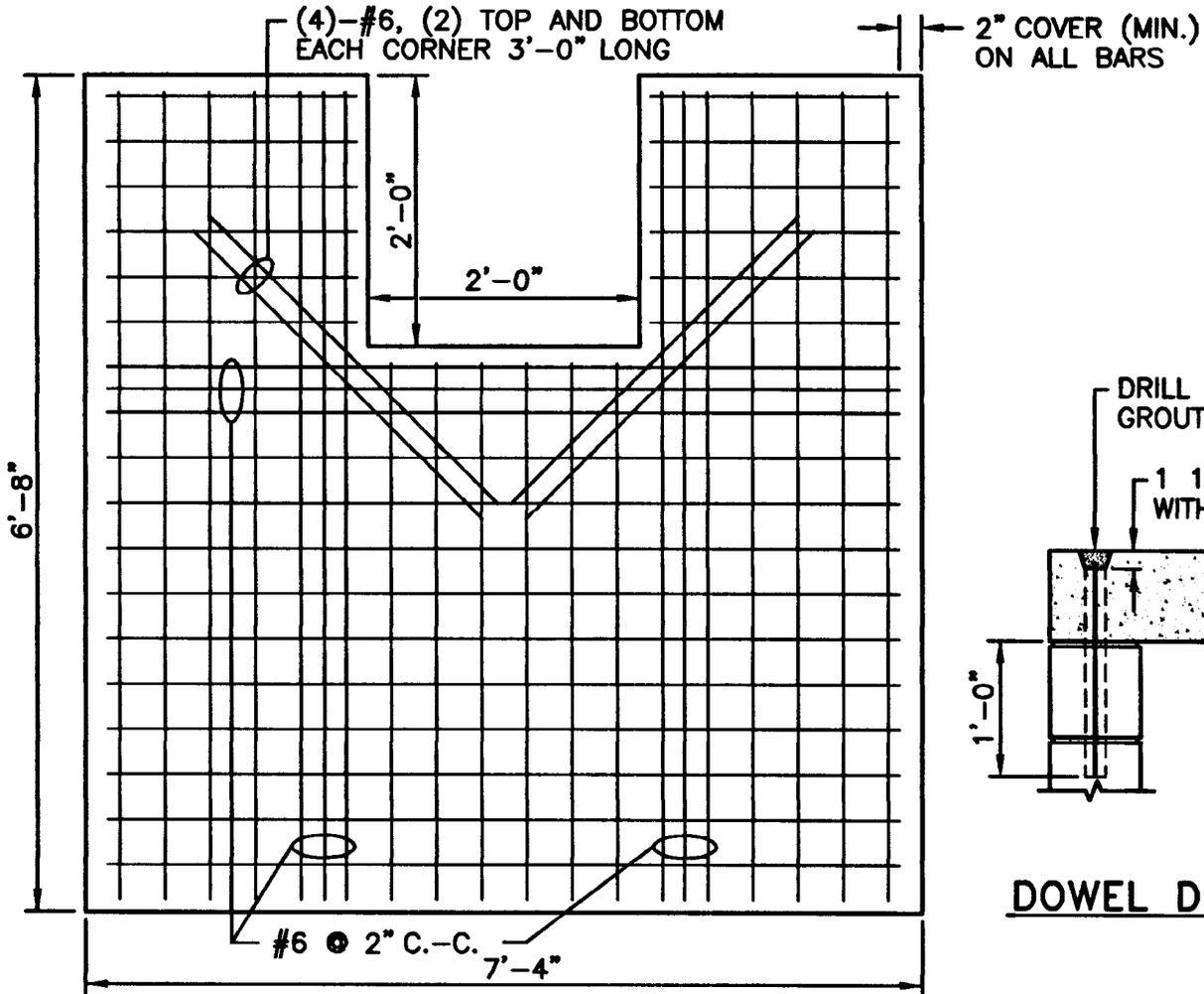
*Edmund Parker Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

JUNE 15, 1998  
ISSUE DATE





**SECTION**



**DOWEL DETAIL**

**PLAN**

**NOTES:**

1. SHALL BE IN ACCORDANCE WITH SECTION 702 OF THE R.I. STANDARD SPECIFICATIONS.
2. THE CENTERLINE OF THE OPENING MUST BE WITHIN 2'-0" FROM THE STEPS.
3. TOP SLAB HAS BEEN REINFORCED TO MEET OR EXCEED H-25 OR HS-25 LOADINGS WITH EARTH PRESSURES INCLUDED. THIS IMPLIES THAT THE TOP SLAB IS DESIGNED FOR AXLE LOADS OF NO MORE THAN 20 TONS.
4. ALL REBARS ARE TO HAVE A MINIMUM 2" CLEARANCE FROM OPENING.
5. PRECAST SECTION SHALL BE LIFTED USING APPROVED LIFTING LUGS LOCATED SUCH THAT NO DAMAGE TO THE SLAB OCCURS.
6. DOWEL HOLES IN COVER TO BE FORMED OR CORED BY THE FABRICATOR.

**RHODE ISLAND DEPARTMENT OF TRANSPORTATION**

**CONCRETE COVER FOR SHALLOW  
6'-0" SQUARE CATCH BASINS**

REVISIONS		
NO.	BY	DATE

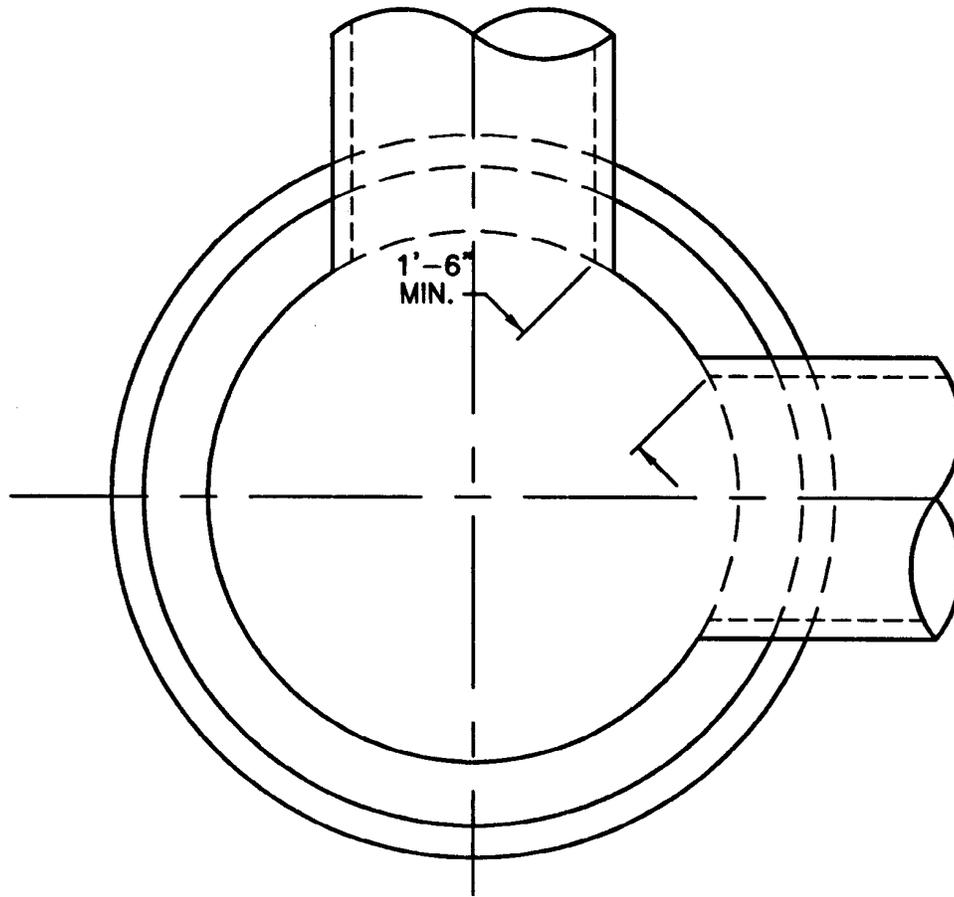
*James H. Capobianco*  
CHIEF ENGINEER  
TRANSPORTATION

*Edmund J. Parker Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

JUNE 15, 1998  
ISSUE DATE







**CROSS SECTION OF MANHOLE OR CATCH BASIN**

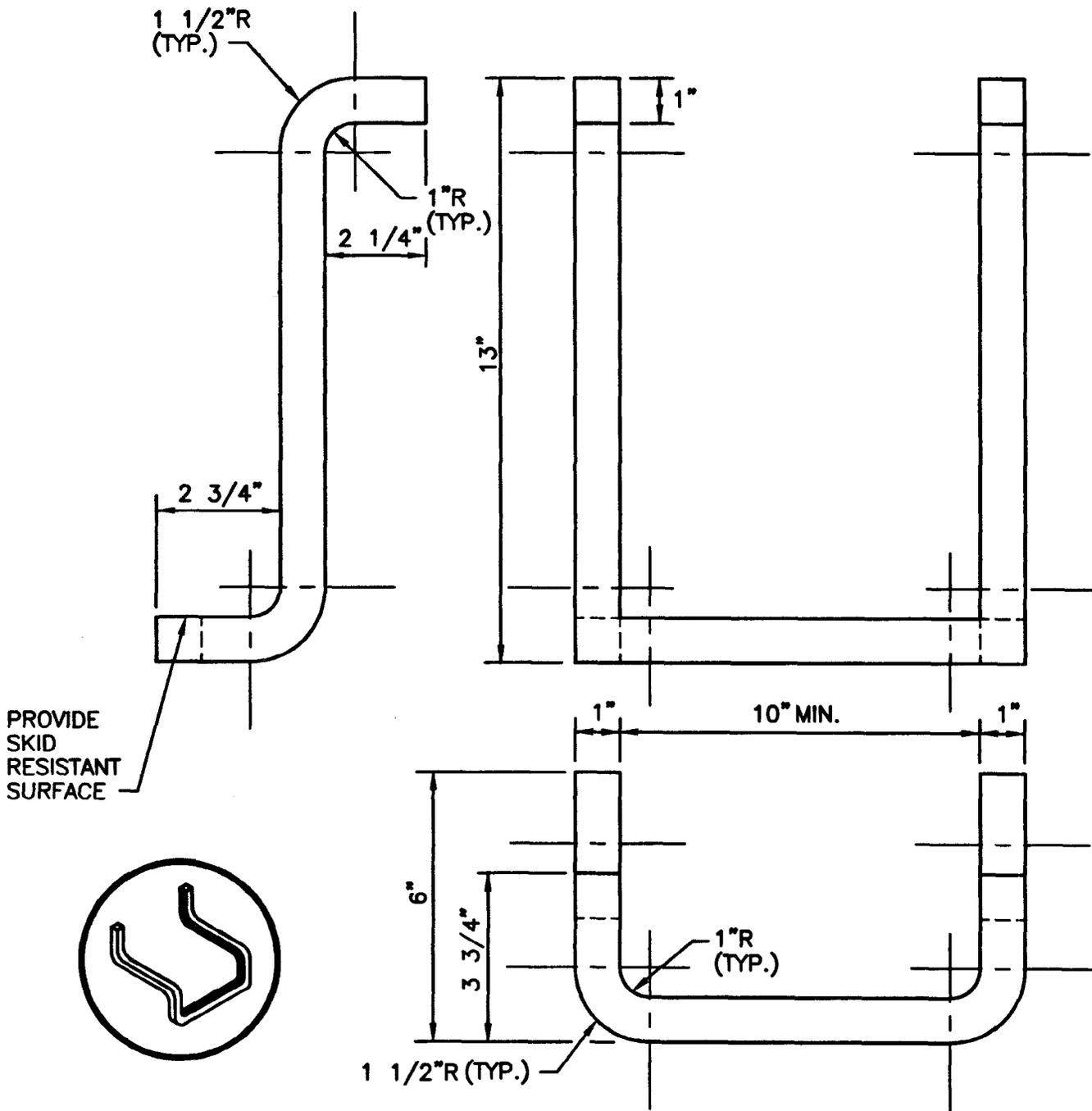
	4 FT. MANHOLE OR CATCH BASIN	5 FT. MANHOLE OR CATCH BASIN	6 FT. MANHOLE OR CATCH BASIN
MAX. PIPE O.D. STRAIGHT THRU TO 45° DEFLECTION	33 1/2" O.D. 27" R.C. PIPE	44" O.D. 36" R.C. PIPE	51" O.D. 42" R.C. PIPE
MAX. PIPE O.D. 90° DEFLECTION	23" O.D. 18" R.C. PIPE	33 1/2" O.D. 27" R.C. PIPE	37" O.D. 30" R.C. PIPE

**NOTE:**

1. SHALL BE IN ACCORDANCE WITH SECTION 702 OF THE R.I. STANDARD SPECIFICATIONS.
2. THE MINIMUM DISTANCE BETWEEN PIPES ENTERING MANHOLES AND CATCH BASINS MUST BE 1'-6". THE SIZE OF THE CATCH BASIN WILL BE DETERMINED BY THE PIPE SIZE AND ENTRY ANGLE. (SEE TABLE ABOVE.)

**RHODE ISLAND DEPARTMENT OF TRANSPORTATION**

REVISIONS			<b>ROUND MANHOLES AND CATCH BASINS MAXIMUM PIPE SIZE STANDARD</b>	
NO.	BY	DATE		
			 CHIEF ENGINEER TRANSPORTATION	 CHIEF DESIGN ENGINEER TRANSPORTATION



**NOTES:**

1. STEPS SHALL CONFORM TO SECTION M.04 OF THE R.I. STANDARD SPECIFICATIONS.
2. CROSS SECTION AREA MAY BE REDUCED UPON SUBMISSION OF CERTIFIED LOAD TESTS. STEPS MUST SUPPORT 300 LBS.
3. STOCK SHOWN IS 1" SQUARE WHICH MAY BE REPLACED BY 1" DIAMETER.

**RHODE ISLAND DEPARTMENT OF TRANSPORTATION**

REVISIONS		
NO.	BY	DATE

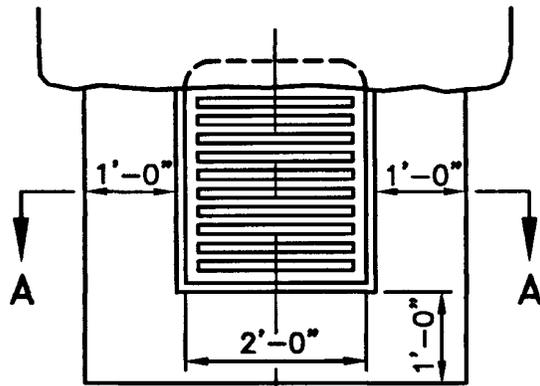
**CATCH BASIN AND MANHOLE STEP**

*James A. Capaldi*  
 CHIEF ENGINEER  
 TRANSPORTATION

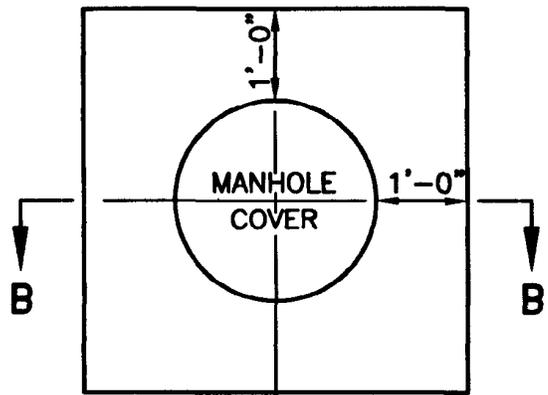
*Edmund J. Parker Jr.*  
 CHIEF DESIGN ENGINEER  
 TRANSPORTATION

**JUNE 15, 1998**  
 ISSUE DATE

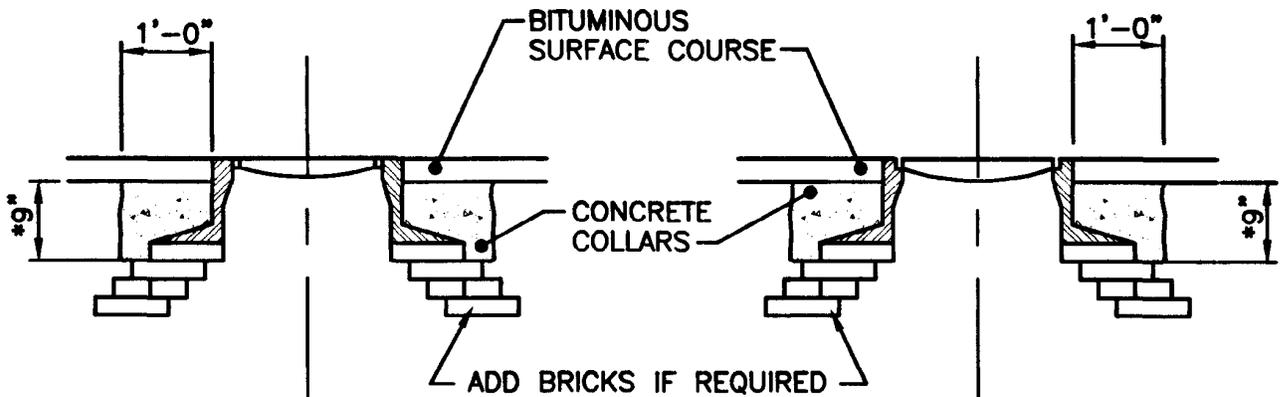




PLAN



PLAN



SECTION A-A  
CATCH BASINS

SECTION B-B  
MANHOLE COVERS

**NOTES:**

1. SHALL BE IN ACCORDANCE WITH SECTION 702 OF THE R.I. STANDARD SPECIFICATIONS.
2. COLLARS TO BE CONCRETE MASONRY AS DIRECTED.
- \*3. 9" OF CONCRETE IN BITUMINOUS PAVED AREAS. MEET EXISTING CONCRETE IN PORTLAND CEMENT CONCRETE AREAS.

**RHODE ISLAND DEPARTMENT OF TRANSPORTATION**

REVISIONS		
NO.	BY	DATE

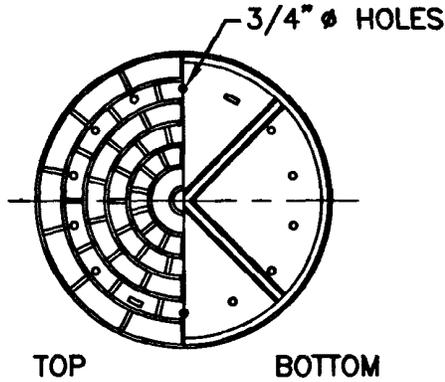
**CONCRETE COLLARS**

*James A. Casabelli*  
CHIEF ENGINEER  
TRANSPORTATION

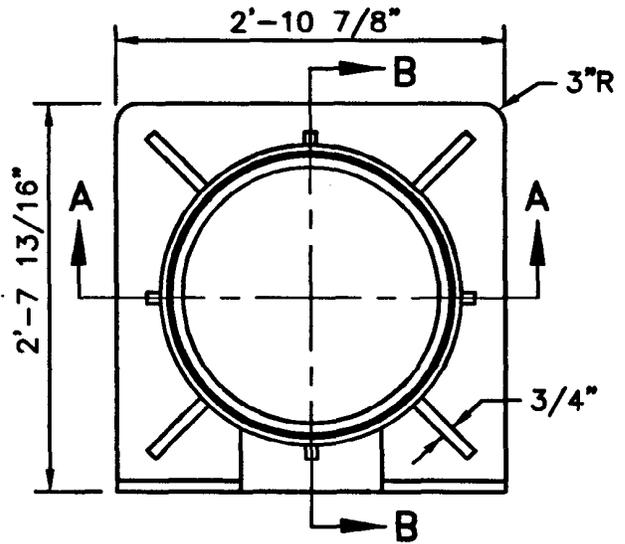
*Edmund Parker Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

JUNE 15, 1998  
ISSUE DATE

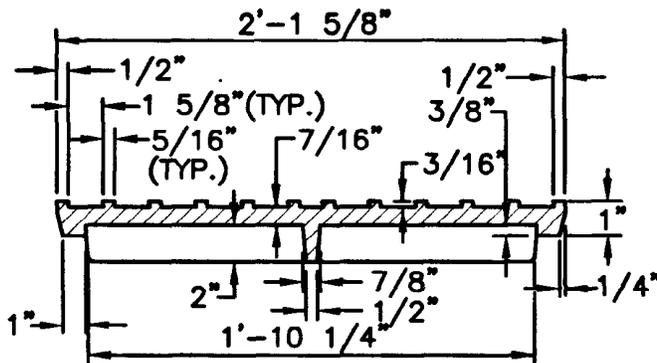




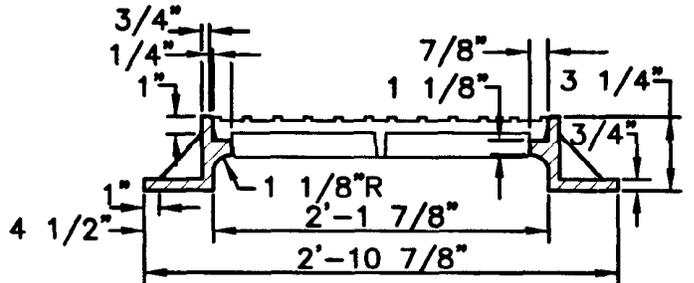
**COVER**



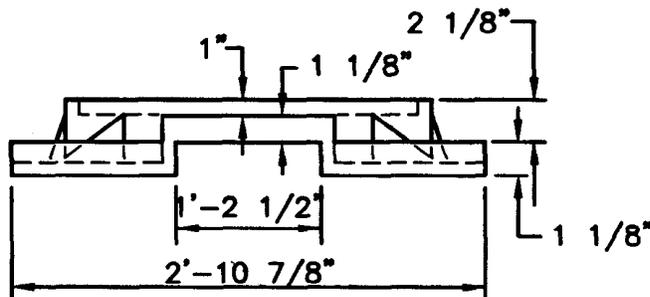
**FRAME**



**FRONT ELEVATION**



**SECTION A-A**



**SECTION B-B**

**NOTES:**

1. FRAME AND COVER SHALL CONFORM TO SECTION M.04 OF THE R.I. STANDARD SPECIFICATIONS.
2. FRAME AND COVER SEATS TO BE MACHINE FINISH.

**RHODE ISLAND DEPARTMENT OF TRANSPORTATION**

**LIGHT-DUTY  
SQUARE FRAME AND ROUND COVER**

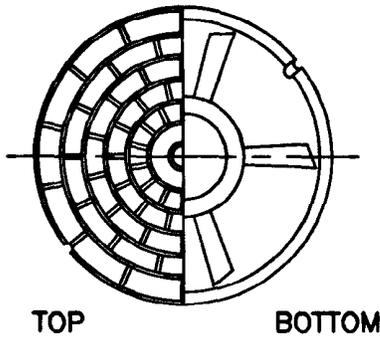
REVISIONS		
NO.	BY	DATE

*James A. Capaldi*  
CHIEF ENGINEER  
TRANSPORTATION

*Edmund J. Parker Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

JUNE 15, 1998  
ISSUE DATE

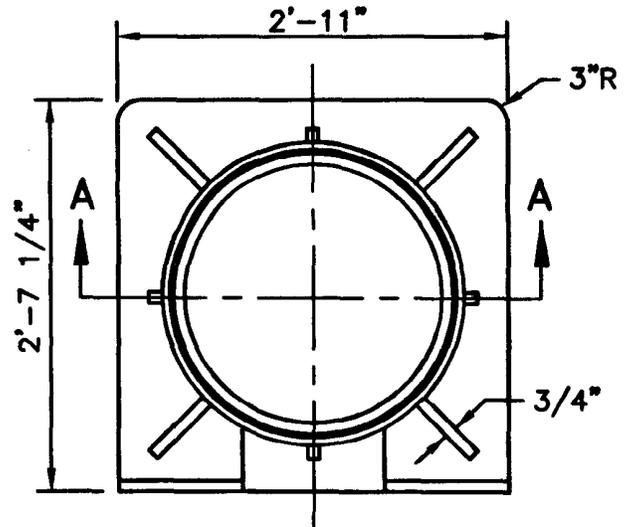




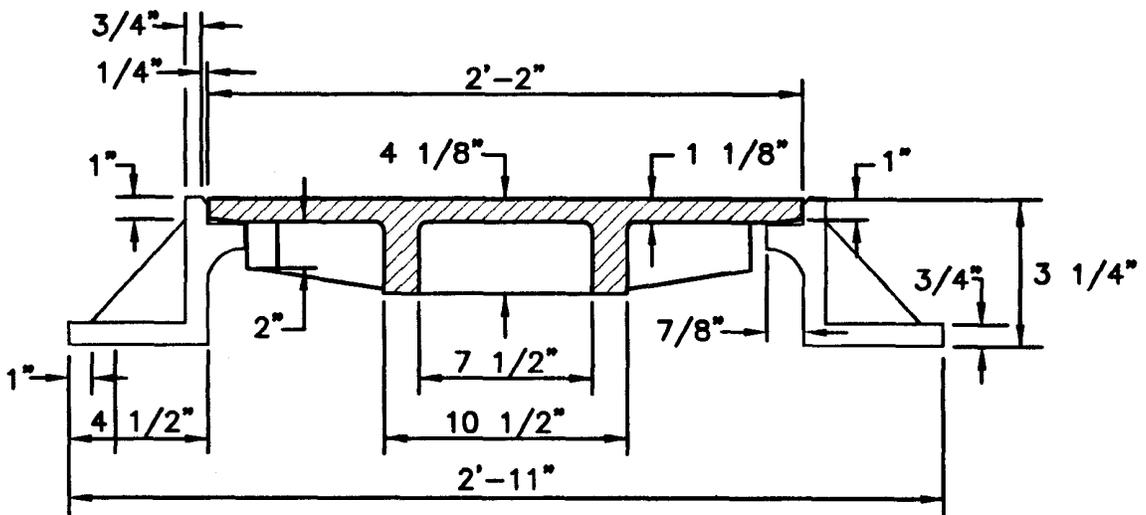
TOP

BOTTOM

COVER



FRAME



SECTION A-A

**NOTES:**

1. FRAME AND COVER SHALL CONFORM TO SECTION M.04 OF THE R.I. STANDARD SPECIFICATIONS.
2. FRAME AND COVER SEATS TO BE MACHINE FINISH.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE

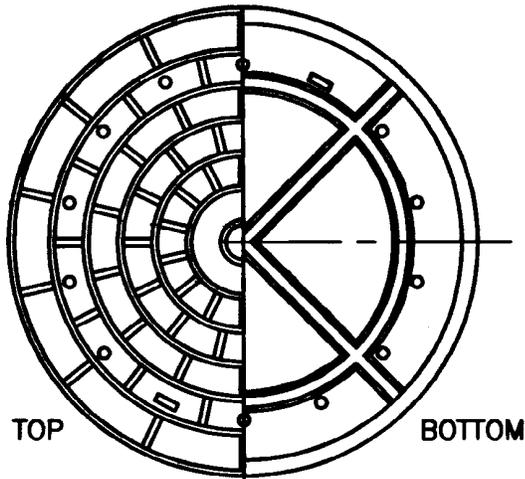
**HEAVY-DUTY  
SQUARE FRAME AND ROUND COVER**

*James A. Capaldi*  
CHIEF ENGINEER  
TRANSPORTATION

*Edmund W. Parker Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

JUNE 15, 1998  
ISSUE DATE

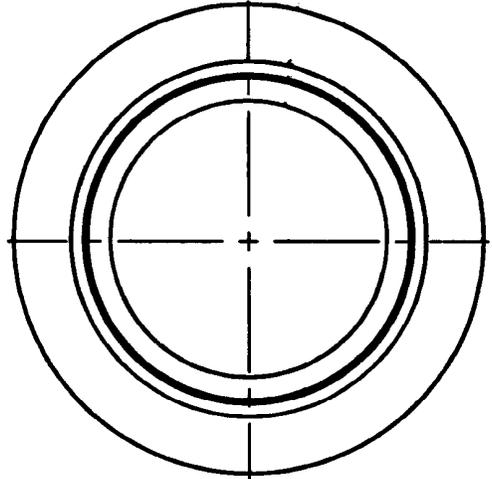




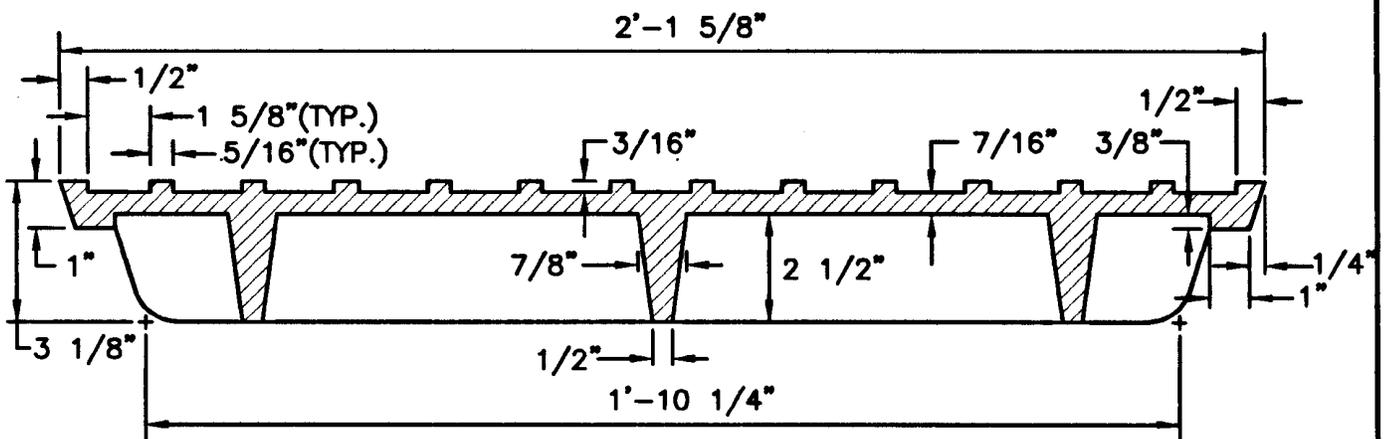
TOP

BOTTOM

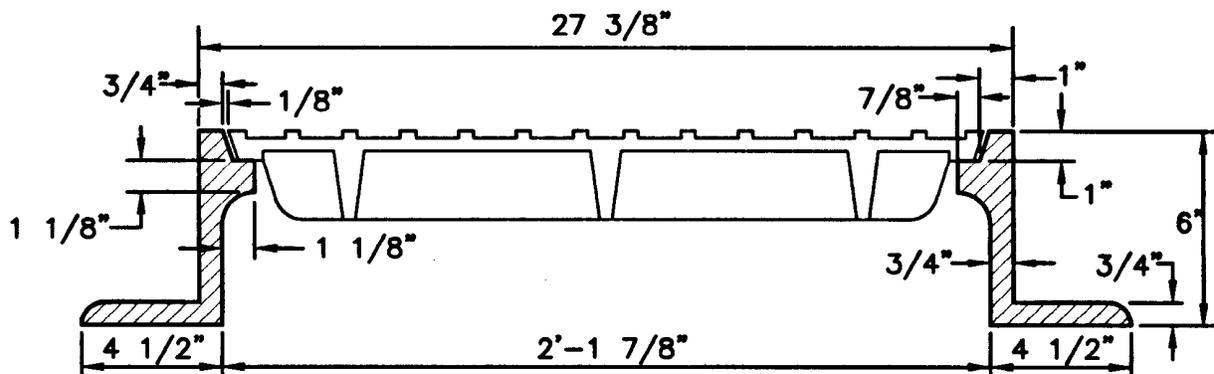
COVER



FRAME



COVER SECTION



FRAME SECTION

**NOTE:**  
 FRAME AND GRATE SHALL CONFORM TO SECTION M.04 OF THE R.I. STANDARD SPECIFICATIONS.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

ROUND FRAME AND COVER  
 LIGHT-DUTY

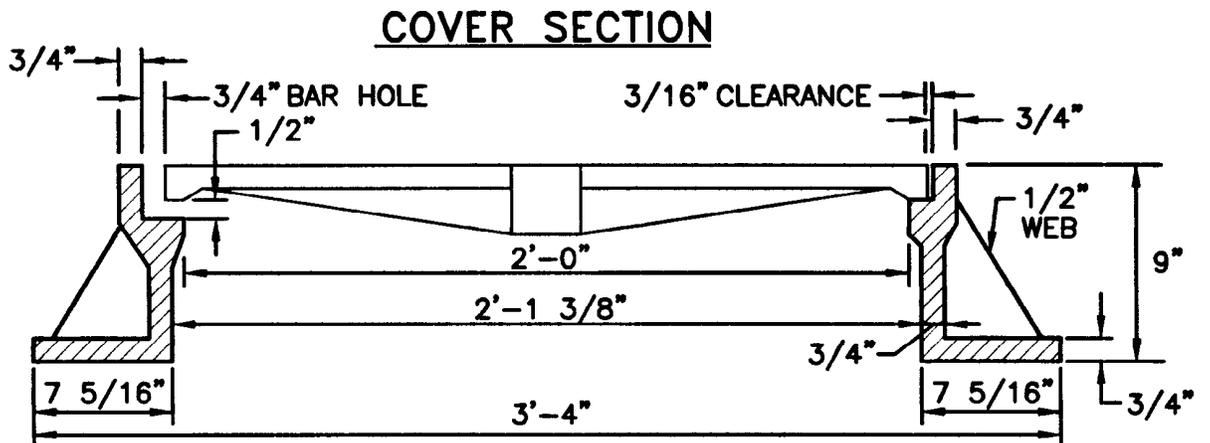
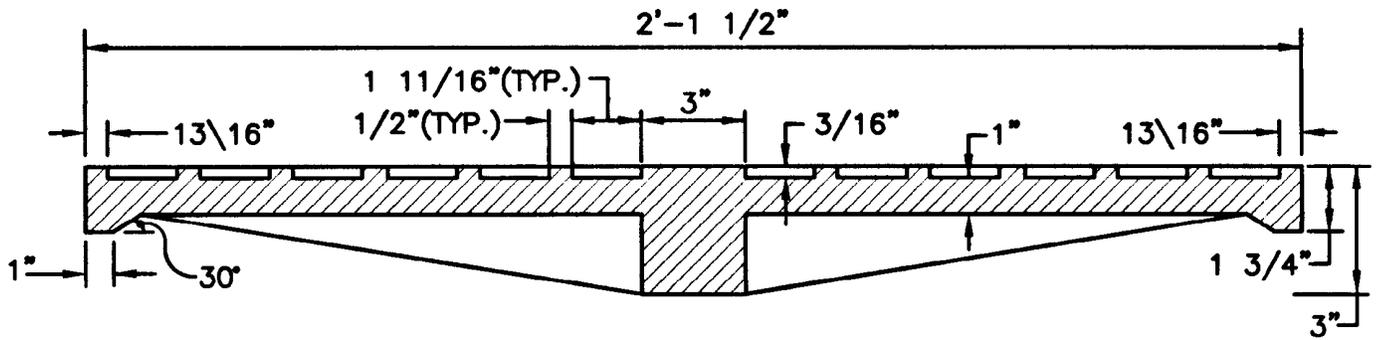
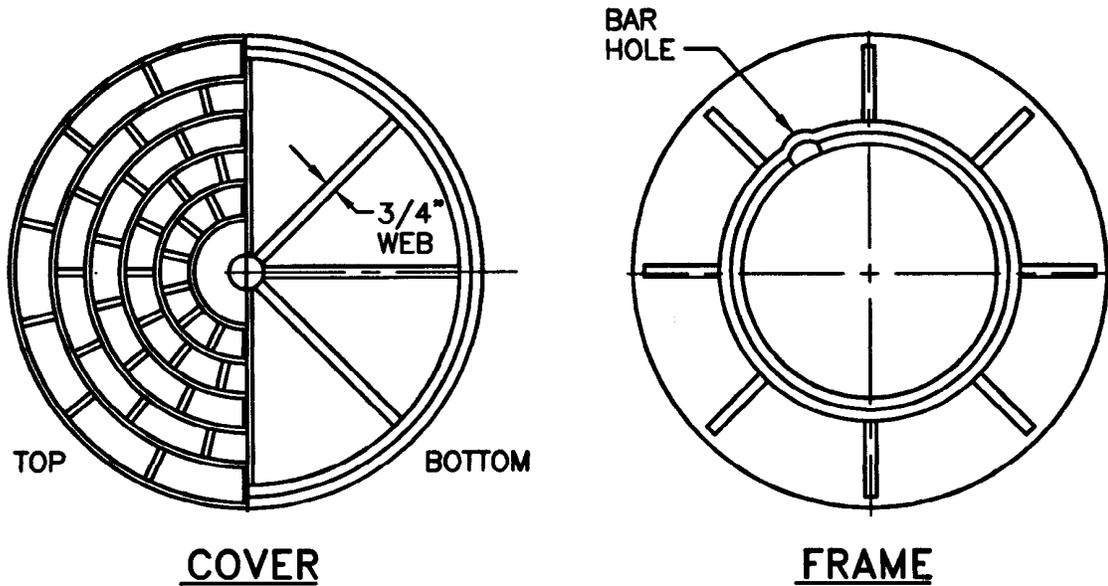
REVISIONS		
NO.	BY	DATE

*James A. Casella*  
 CHIEF ENGINEER  
 TRANSPORTATION

*Edward J. Parker Jr.*  
 CHIEF DESIGN ENGINEER  
 TRANSPORTATION

JUNE 15, 1998  
 ISSUE DATE





**NOTES:**

1. FRAME AND GRATE SHALL CONFORM TO SECTION M.04 OF THE R.I. STANDARD SPECIFICATIONS.
2. FRAME AND COVER SEATS MUST HAVE MACHINE FINISH.

**RHODE ISLAND DEPARTMENT OF TRANSPORTATION**

**HEAVY-DUTY  
ROUND FRAME AND COVER**

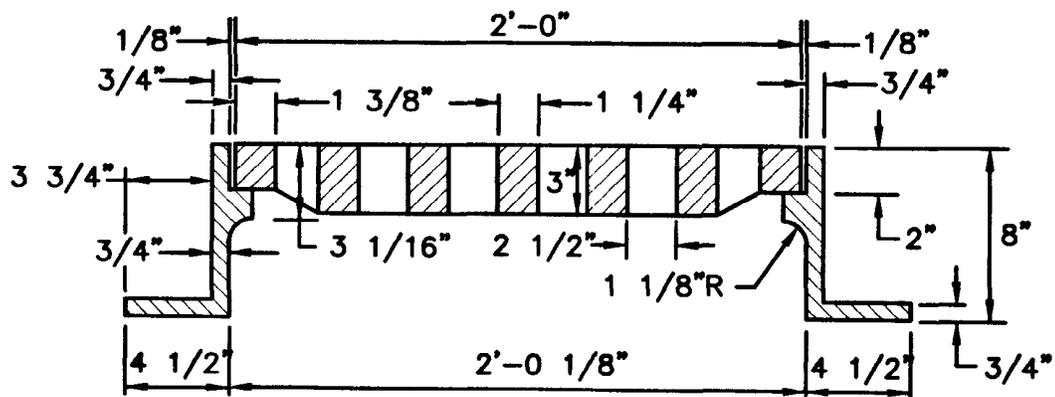
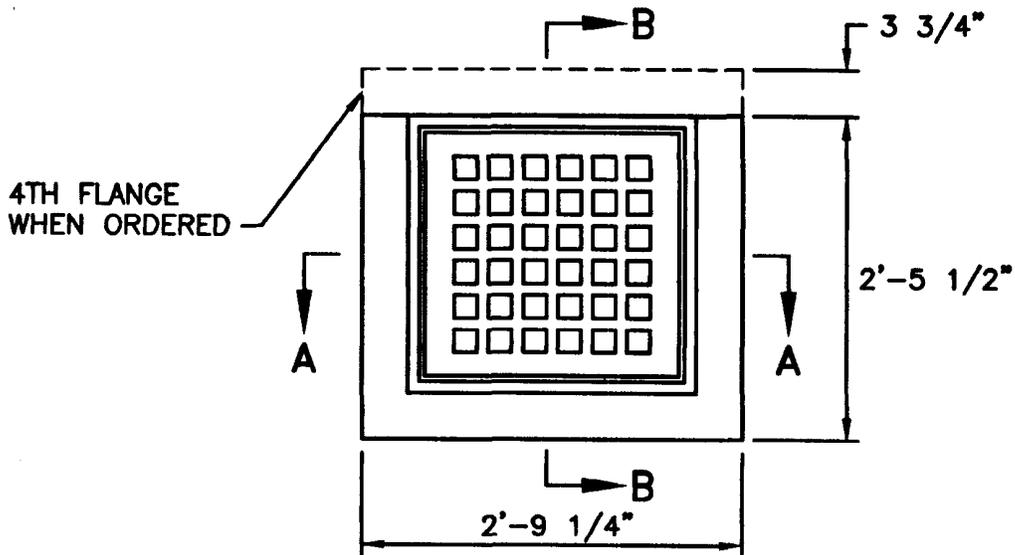
REVISIONS		
NO.	BY	DATE

*James R. Gualdi*  
CHIEF ENGINEER  
TRANSPORTATION

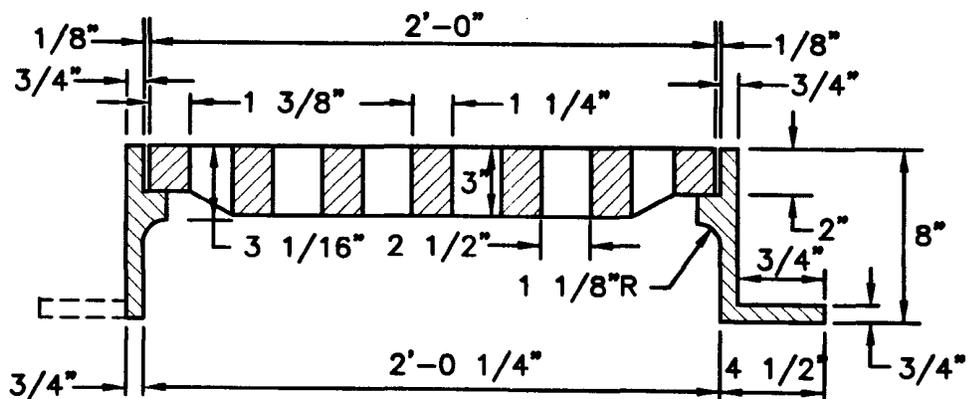
*Edmund Parker Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

JUNE 15, 1998  
ISSUE DATE





**SECTION A-A**



**SECTION B-B**

**NOTE:**  
FRAME AND GRATE SHALL CONFORM TO SECTION M.04 OF THE R.I. STANDARD SPECIFICATIONS.

**RHODE ISLAND DEPARTMENT OF TRANSPORTATION**

REVISIONS		
NO.	BY	DATE

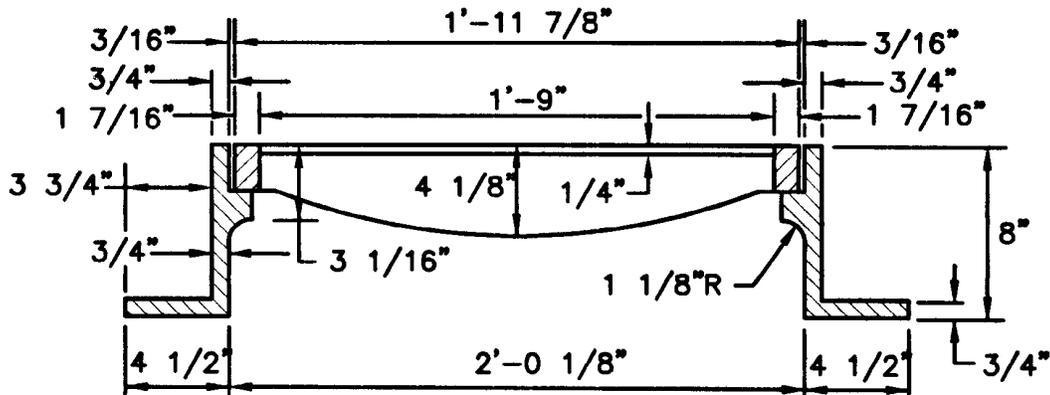
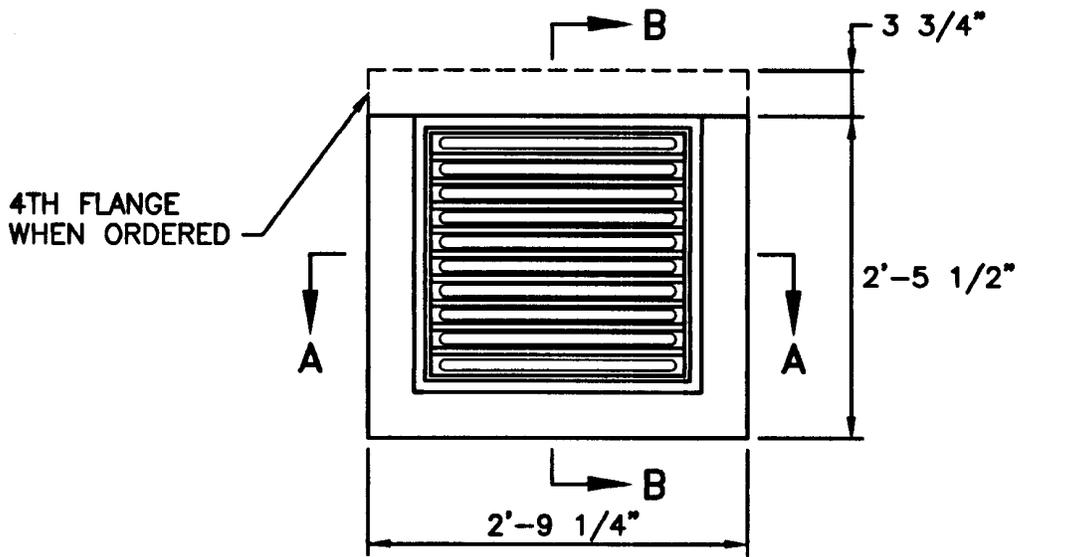
**SQUARE FRAME AND GRATE**

*James A. Casella*  
CHIEF ENGINEER  
TRANSPORTATION

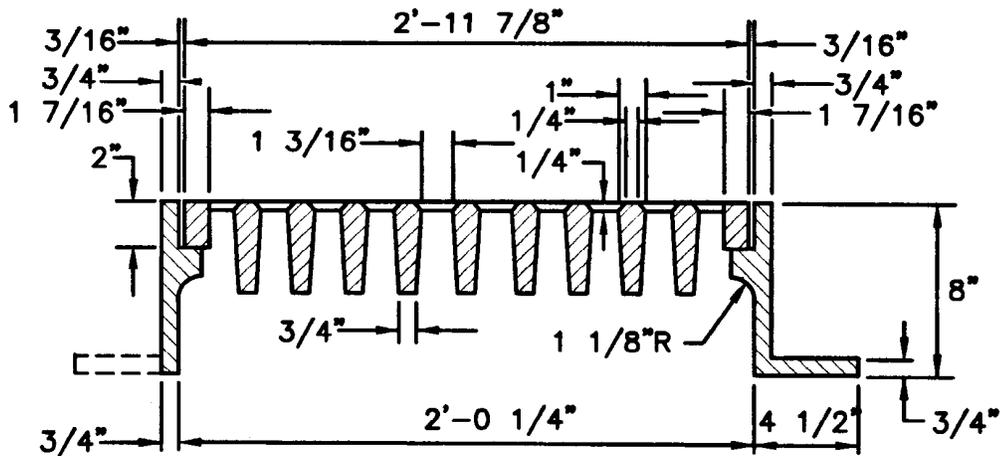
*Edmund J. Parker Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

**JUNE 15, 1998**  
ISSUE DATE





**SECTION A-A**



**SECTION B-B**

**NOTE:**  
FRAME AND GRATE SHALL CONFORM TO SECTION M.04 OF THE R.I. STANDARD SPECIFICATIONS.

**RHODE ISLAND DEPARTMENT OF TRANSPORTATION**

REVISIONS		
NO.	BY	DATE

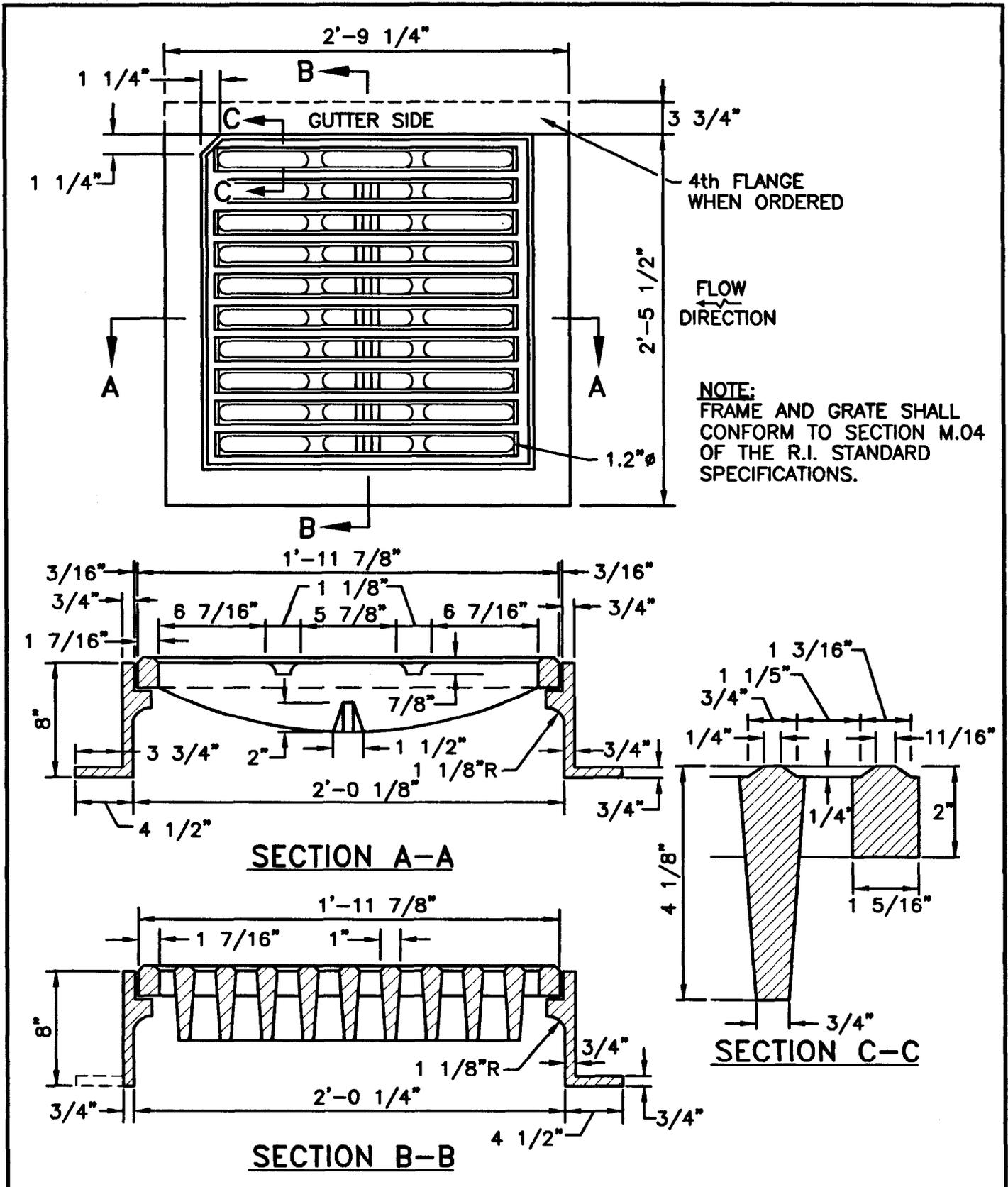
**SQUARE FRAME AND GRATE**

*James A. Capaldi*  
CHIEF ENGINEER  
TRANSPORTATION

*Edmund J. Perkins Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

JUNE 15, 1998  
ISSUE DATE





RHODE ISLAND DEPARTMENT OF TRANSPORTATION

SQUARE FRAME AND GRATE  
 (BICYCLE SAFE)

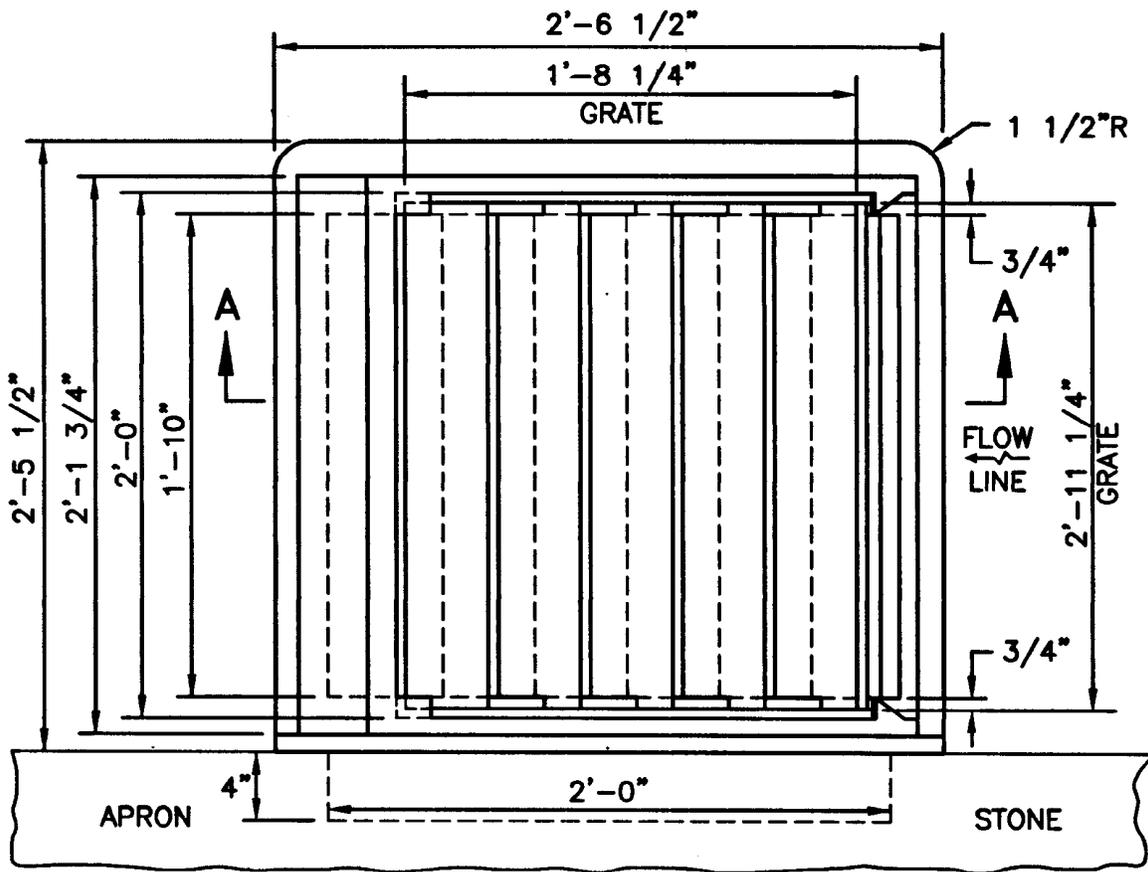
REVISIONS		
NO.	BY	DATE

*James A. Capaldi*  
 CHIEF ENGINEER  
 TRANSPORTATION

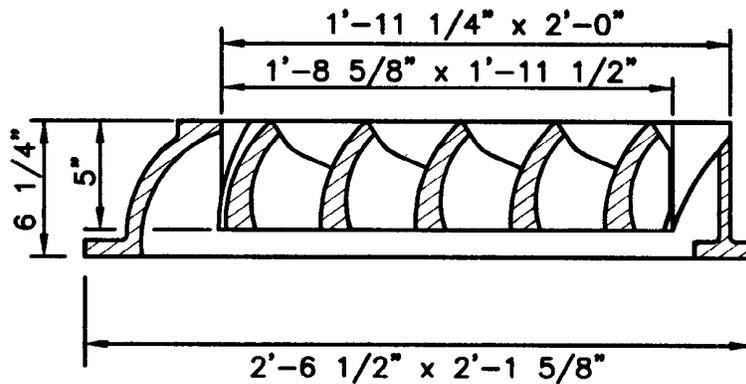
*Edmund Parker Jr*  
 CHIEF DESIGN ENGINEER  
 TRANSPORTATION

JUNE 15, 1998  
 ISSUE DATE





**PLAN**



**SECTION A-A**

**NOTES:**

1. FRAME AND GRATE SHALL CONFORM TO SECTION M.04 OF THE R.I. STANDARD SPECIFICATIONS.
2. GRATES CAN BE INSTALLED IN ONLY ONE POSITION IN THE FRAME. CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLING FRAME FOR PROPER ORIENTATION OF GRATE.
3. ORDER 2 FLANGE FRAME WHEN USED WITH CURBING OR APRON STONE.

**RHODE ISLAND DEPARTMENT OF TRANSPORTATION**

REVISIONS		
NO.	BY	DATE

**HIGH CAPACITY FRAME AND GRATE**

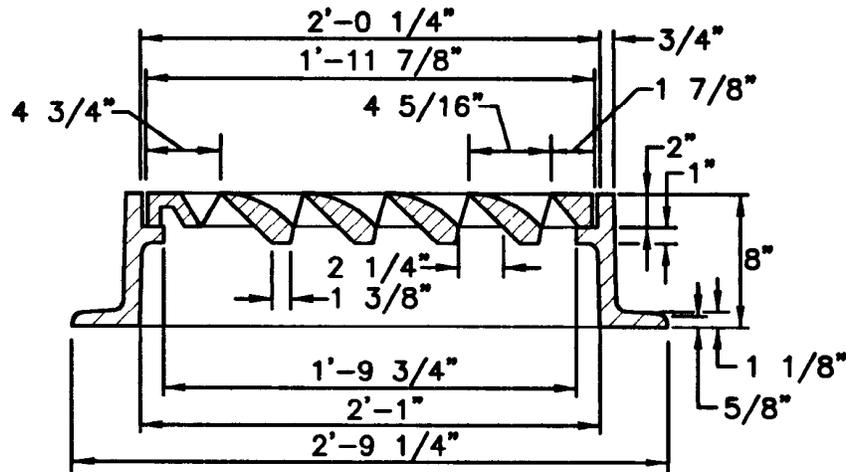
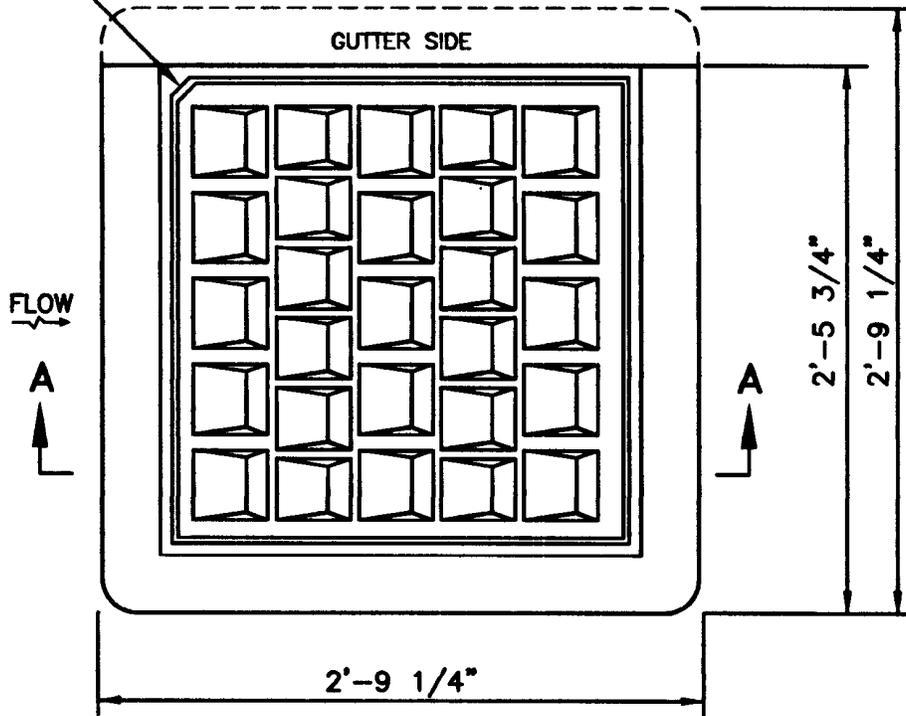
*James A. Capaldi*  
 CHIEF ENGINEER  
 TRANSPORTATION

*Edmund J. Parker Jr.*  
 CHIEF DESIGN ENGINEER  
 TRANSPORTATION

**JUNE 15, 1998**  
 ISSUE DATE



(SEE NOTE 2)



**SECTION A-A**

**NOTES:**

1. FRAME AND COVER SHALL CONFORM TO SECTION M.04 OF THE R.I. STANDARD SPECIFICATIONS.
2. THIS CORNER LEFT FOR "LEFT" GRATE, DIAGONALLY OPPOSITE CORNER FOR "RIGHT" GRATE TO FIT IN KEYED FRAME.

**RHODE ISLAND DEPARTMENT OF TRANSPORTATION**

**HIGH CAPACITY FRAME AND GRATE  
(BICYCLE SAFE)**

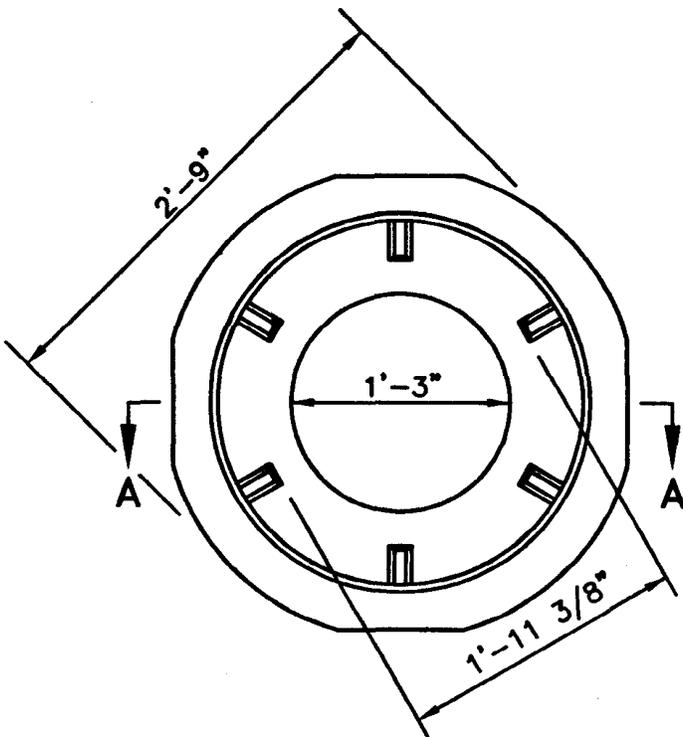
REVISIONS		
NO.	BY	DATE

*James H. Capaldi*  
CHIEF ENGINEER  
TRANSPORTATION

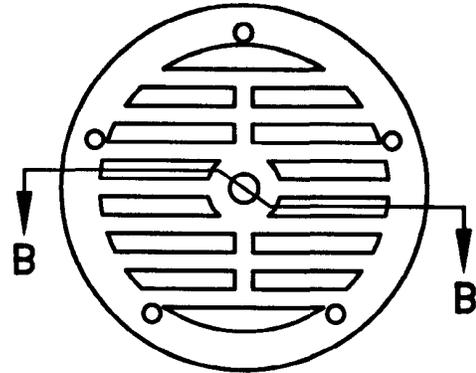
*Edmund J. Parker Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

**JUNE 15, 1998**  
ISSUE DATE

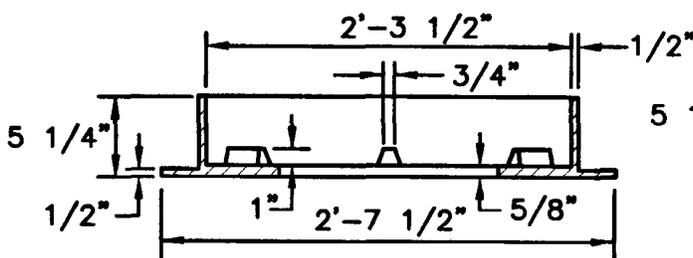




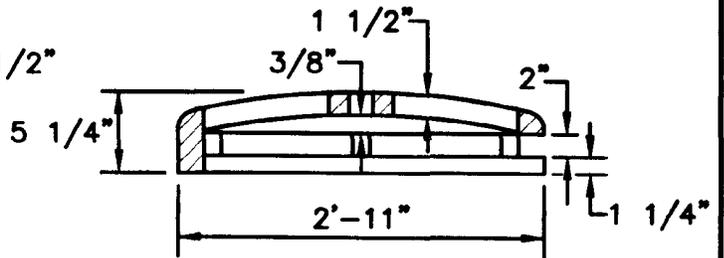
FRAME



GRATE



SECTION A-A



SECTION B-B

**NOTE:**

FRAME AND GRATE SHALL CONFORM TO SECTION M.04 OF THE R.I. STANDARD SPECIFICATIONS.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE

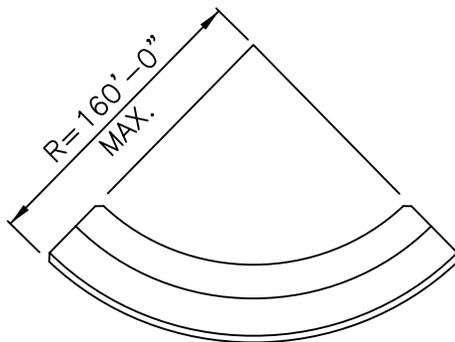
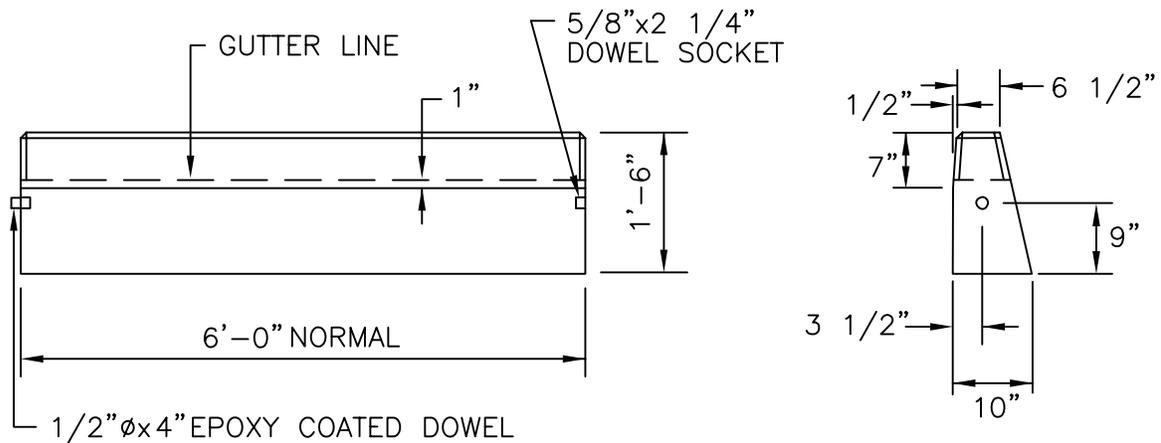
**ROUND FRAME AND GRATE**

*James A. Capaldi*  
CHIEF ENGINEER  
TRANSPORTATION

*Edward J. Parker Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

JUNE 15, 1998  
ISSUE DATE





CIRCULAR CURB

NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION 906 OF THE R.I. STANDARD SPECIFICATIONS.
2. MINIMUM LENGTH OF STRAIGHT OR CIRCULAR FILLER PIECES TO BE 3'-0".
3. EXPOSED SURFACES TO HAVE A SPONGE FLOAT FINISH.
4. CIRCULAR CURB IS REQUIRED ON CURVES WITH RADII OF 160'-0" OR LESS. STRAIGHT CURB TO BE USED ON CURVES OF MORE THAN 160'-0" RADIUS.
5. EXPOSED EDGES TO HAVE A 3/4" CHAMFER.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE
1	MLP	Mar 05

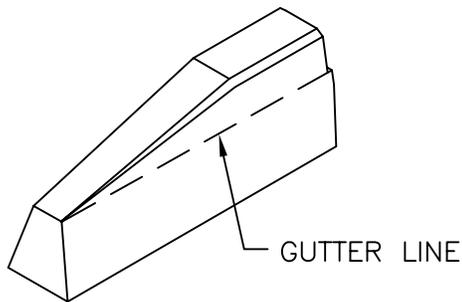
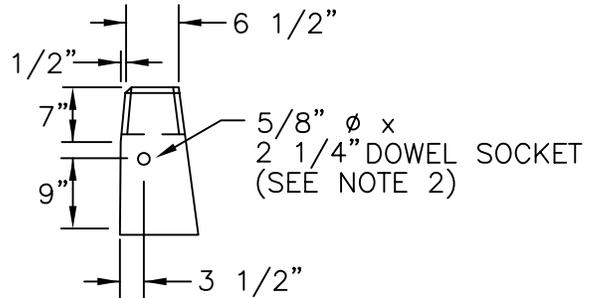
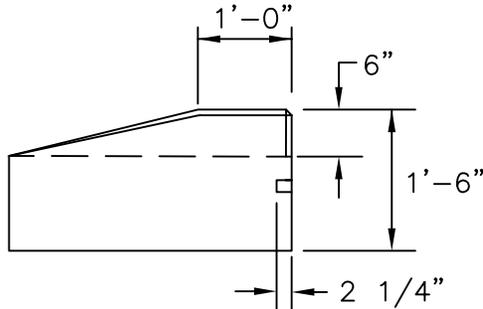
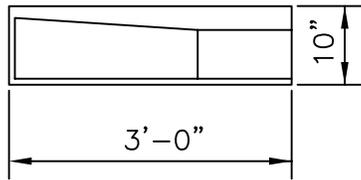
PRECAST CONCRETE CURB

*James A. Capaldi*  
 CHIEF ENGINEER  
 TRANSPORTATION

*Edmund J. Parker Jr.*  
 CHIEF DESIGN ENGINEER  
 TRANSPORTATION

JUNE 15, 1998  
 ISSUE DATE





**NOTES:**

1. SHALL BE IN ACCORDANCE WITH SECTION 906 OF THE R.I. STANDARD SPECIFICATIONS.
2. DRAWING SHOWS TRANSITION CURB FOR ONE DIRECTION, FOR OTHER DIRECTION USE OPPOSITE HAND AND INCLUDE A 1/2"  $\phi$  x 4" EPOXY COATED DOWEL.
3. EXPOSED SURFACES TO HAVE A SPONGE FLOAT FINISH.
4. EXPOSED EDGES TO HAVE A 3/4" CHAMFER.

**RHODE ISLAND DEPARTMENT OF TRANSPORTATION**

**3'-0" PRECAST CONCRETE  
TRANSITION CURB**

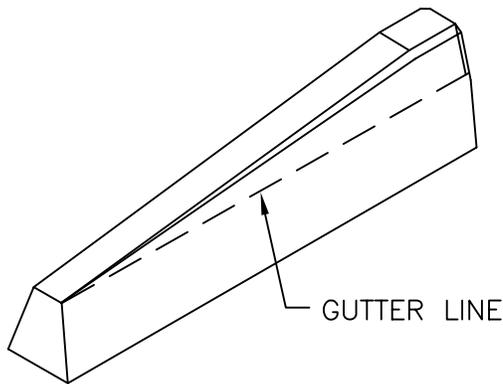
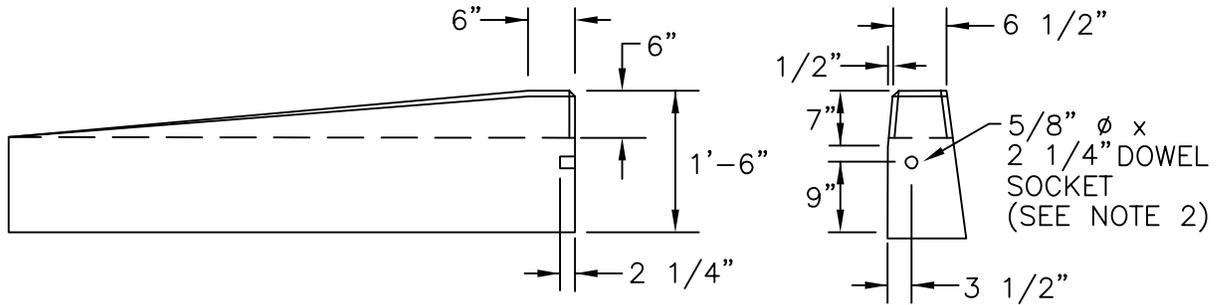
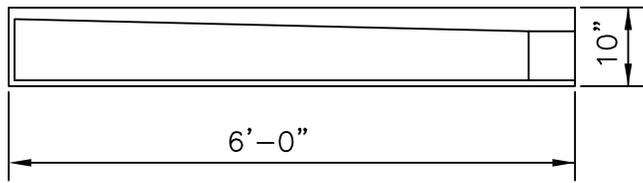
REVISIONS		
NO.	BY	DATE
1	MLP	Mar 05

*James A. Capaldi*  
CHIEF ENGINEER  
TRANSPORTATION

*Edmund J. Parker Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

JUNE 15, 1998  
ISSUE DATE





**NOTES:**

1. SHALL BE IN ACCORDANCE WITH SECTION 906 OF THE R.I. STANDARD SPECIFICATIONS.
2. DRAWING SHOWS TRANSITION CURB FOR ONE DIRECTION. FOR OTHER DIRECTION USE OPPOSITE HAND AND INCLUDE A 1/2"  $\phi$  x 4" EPOXY COATED DOWEL.
3. EXPOSED SURFACES TO HAVE A SPONGE FLOAT FINISH.
4. EXPOSED EDGES TO HAVE A 3/4" CHAMFER.

**RHODE ISLAND DEPARTMENT OF TRANSPORTATION**

**6'-0" PRECAST CONCRETE  
TRANSITION CURB**

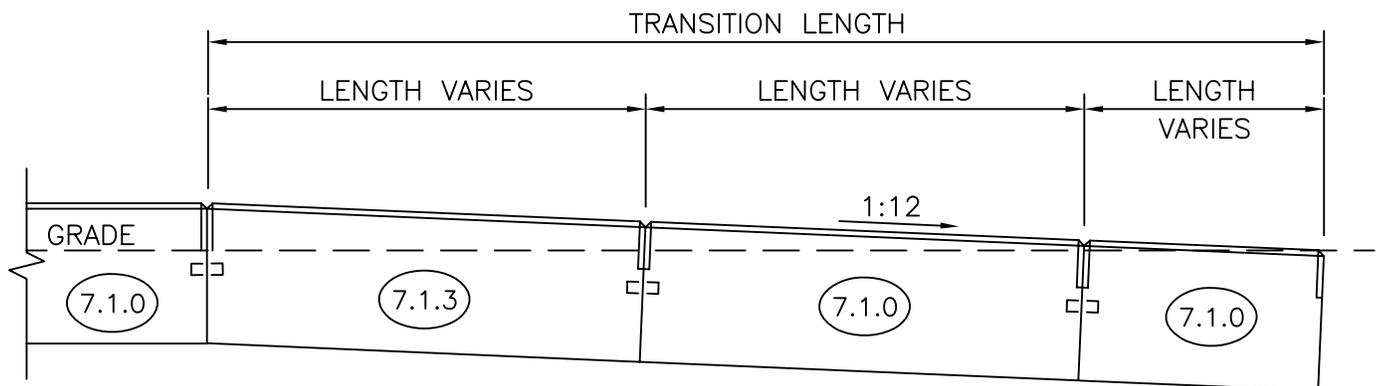
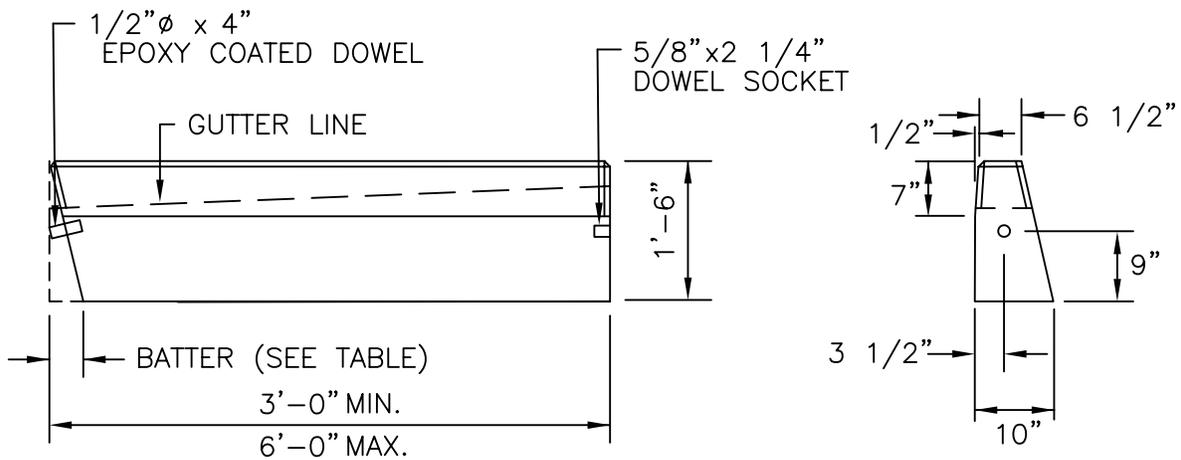
REVISIONS		
NO.	BY	DATE
1	MLP	Mar 05

*James R. Casaldi*  
CHIEF ENGINEER  
TRANSPORTATION

*Edmund J. Parker Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

JUNE 15, 1998  
ISSUE DATE





TRANSITION LENGTH (FT.)	BATTER (IN.)
6.0	1.5
7.0	1.3
8.0	1.2
9.5	1.0
11.5	0.8
15.0	0.6
18.0	0.5

**NOTES:**

1. SHALL BE IN ACCORDANCE WITH SECTION 906 OF THE R.I. STANDARD SPECIFICATIONS.
2. CIRCULAR CURB IS REQUIRED ON CURVES WITH RADII OF 160'-0" OR LESS. STRAIGHT CURB TO BE USED ON CURVES OF MORE THAN 160'-0" RADIUS.
3. EXPOSED EDGES TO HAVE A 3/4" CHAMFER.
4. EXPOSED SURFACES TO HAVE A SPONGE FLOAT FINISH.
5. MINIMUM LENGTH OF STRAIGHT OR CIRCULAR CURB FILLER PIECES TO BE 3'-0" (GREATER LENGTHS PREFERRED).

**RHODE ISLAND DEPARTMENT OF TRANSPORTATION**

REVISIONS		
NO.	BY	DATE
1	MLP	Mar 05

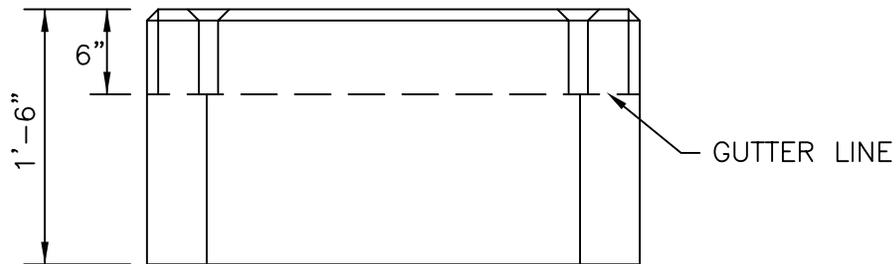
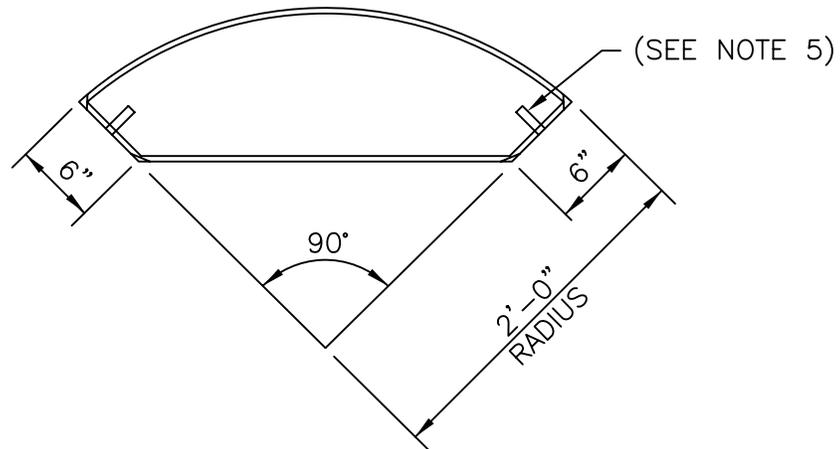
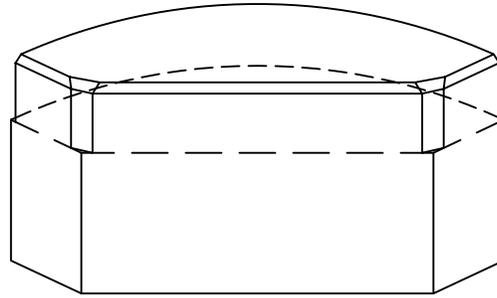
**PRECAST CONCRETE WHEELCHAIR RAMP  
TRANSITION CURB**

*James A. Casabelli*  
CHIEF ENGINEER  
TRANSPORTATION

*Edmund J. Parker Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

JUNE 15, 1998  
ISSUE DATE





**NOTES:**

1. SHALL BE IN ACCORDANCE WITH SECTION 906 OF THE R.I. STANDARD SPECIFICATIONS.
2. EXPOSED SURFACES TO HAVE A SPONGE FLOAT FINISH.
3. NO REINFORCEMENT REQUIRED.
4. EXPOSED EDGES TO HAVE A 3/4" CHAMFER.
5. SEE STD. 7.1.0 FOR DOWEL SOCKET LOCATION.

**RHODE ISLAND DEPARTMENT OF TRANSPORTATION**

REVISIONS		
NO.	BY	DATE
1	MLP	Mar 05

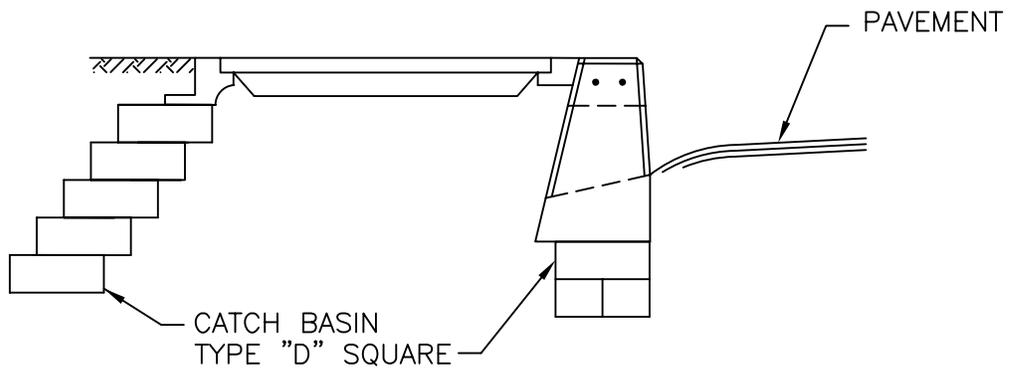
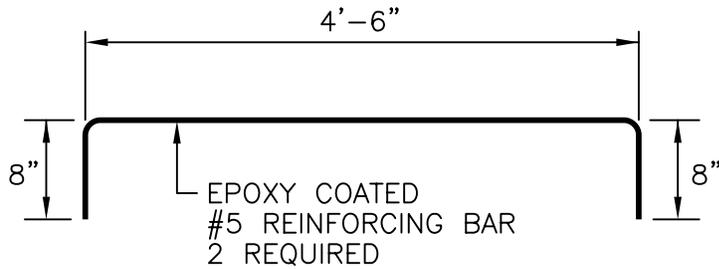
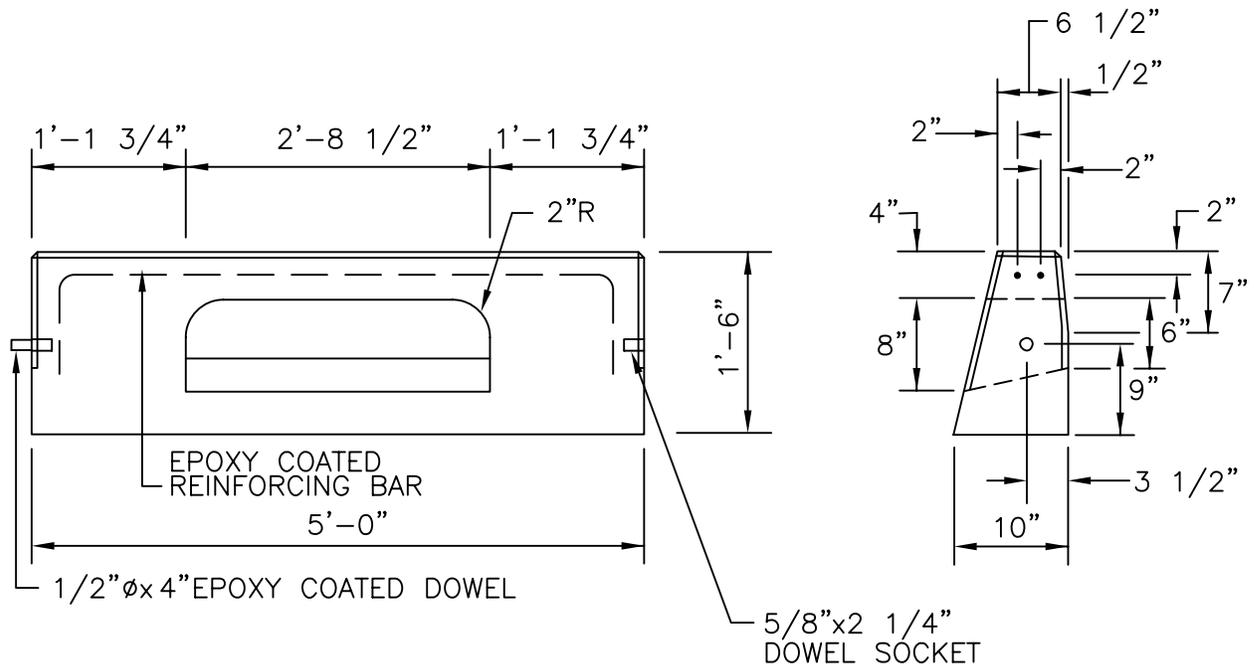
**PRECAST CONCRETE  
2'-0" RADIUS CORNER**

*James H. Casaldi*  
CHIEF ENGINEER  
TRANSPORTATION

*Edmund J. Parker Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

JUNE 15, 1998  
ISSUE DATE





**NOTES:**

1. SHALL BE IN ACCORDANCE WITH SECTION 906 OF THE R.I. STANDARD SPECIFICATIONS.
2. EXPOSED SURFACES TO HAVE A SPONGE FLOAT FINISH.
3. EXPOSED EDGES TO HAVE A 3/4" CHAMFER.

**RHODE ISLAND DEPARTMENT OF TRANSPORTATION**

**PRECAST CONCRETE INLET STONE  
(FOR SQUARE CATCH BASIN)**

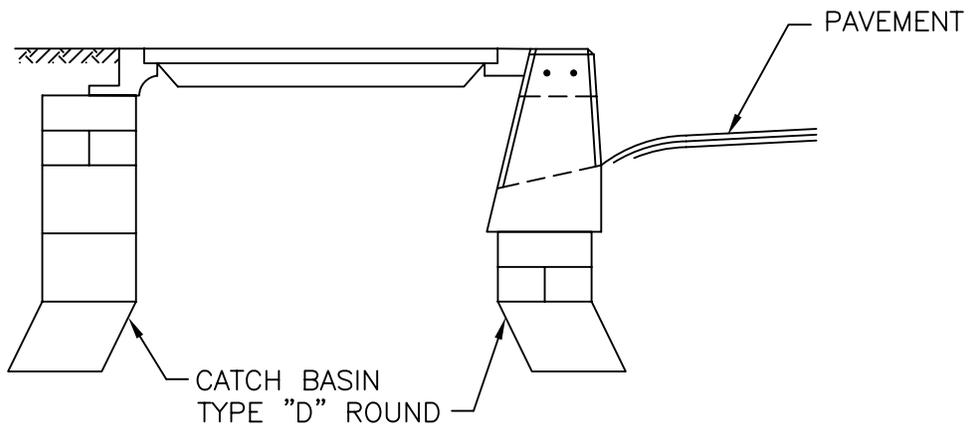
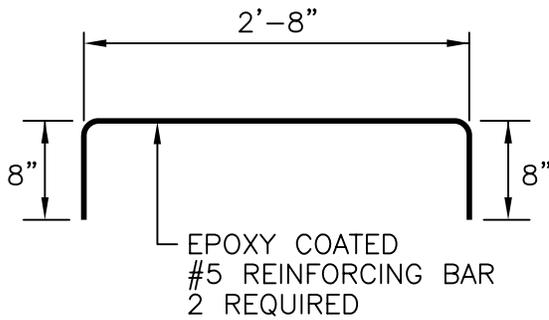
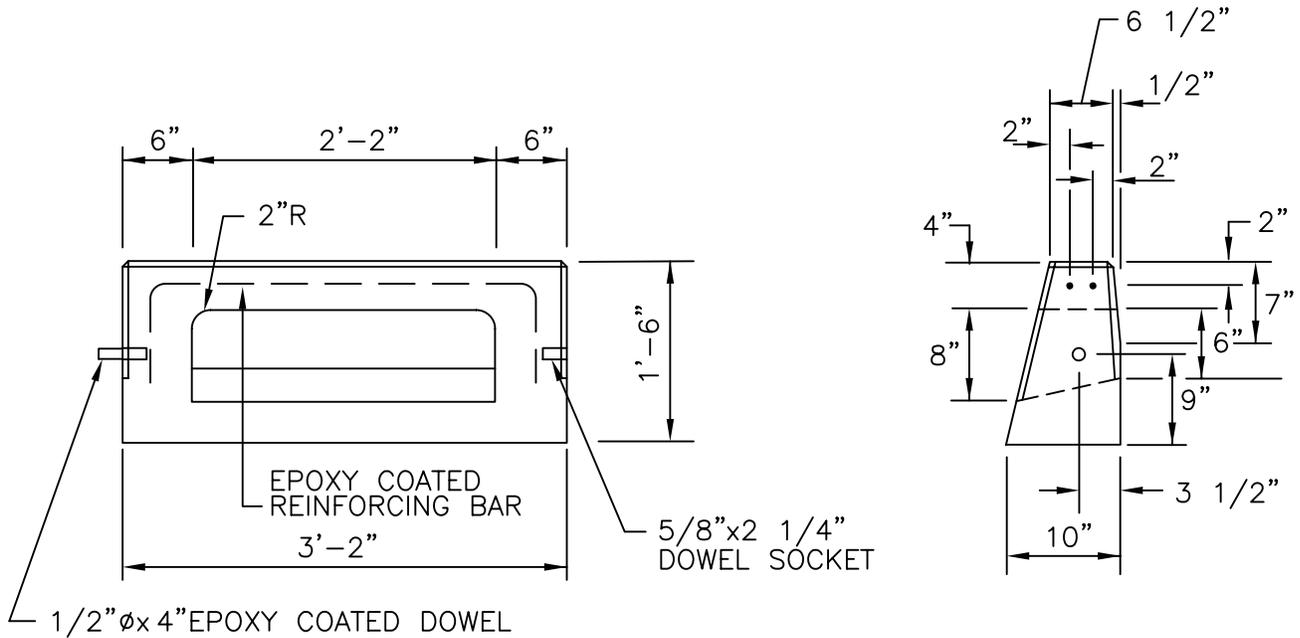
REVISIONS		
NO.	BY	DATE
1	MLP	Mar 05

*James H. Casaldi*  
CHIEF ENGINEER  
TRANSPORTATION

*Edmund J. Parker Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

JUNE 15, 1998  
ISSUE DATE





**NOTES:**

1. SHALL BE IN ACCORDANCE WITH SECTION 906 OF THE R.I. STANDARD SPECIFICATIONS.
2. EXPOSED SURFACES TO HAVE A SPONGE FLOAT FINISH.
3. EXPOSED EDGES TO HAVE A 3/4" CHAMFER.

**RHODE ISLAND DEPARTMENT OF TRANSPORTATION**

**PRECAST CONCRETE INLET STONE  
(FOR ROUND CATCH BASIN)**

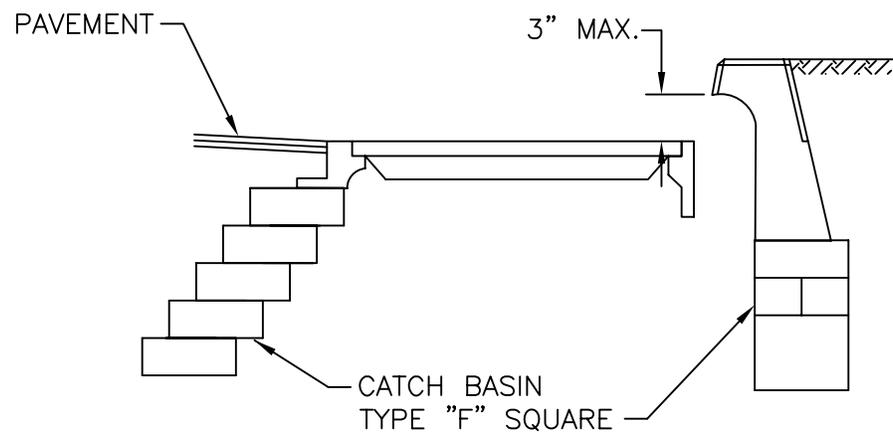
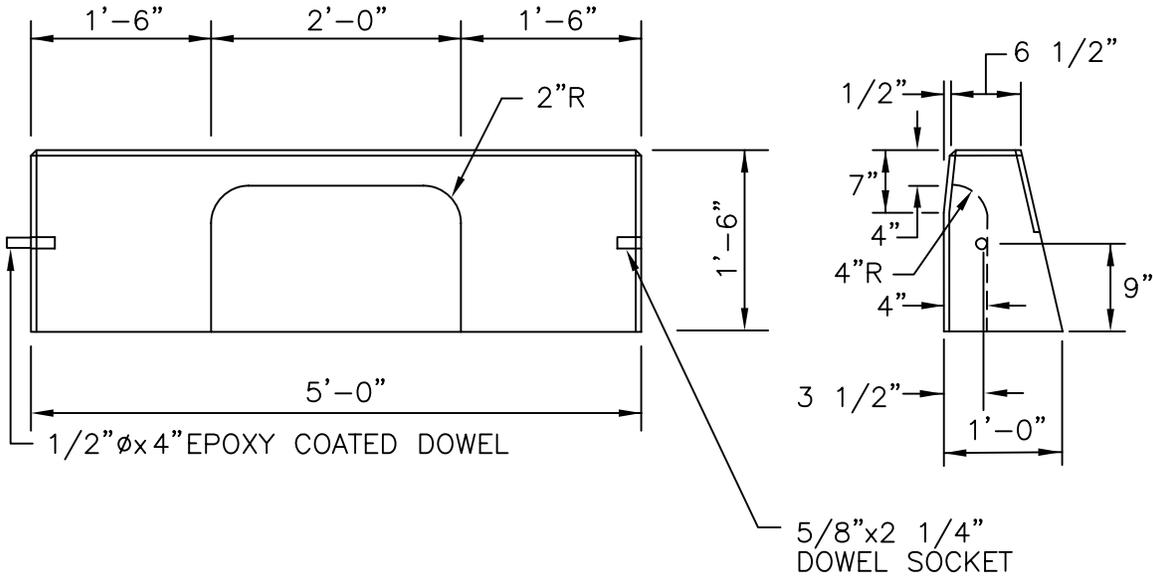
REVISIONS		
NO.	BY	DATE
1	MLP	Mar 05

*James A. Casaldi*  
CHIEF ENGINEER  
TRANSPORTATION

*Edmund Parker Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

JUNE 15, 1998  
ISSUE DATE





- NOTES:**
1. SHALL BE IN ACCORDANCE WITH SECTION 906 OF THE R.I. STANDARD SPECIFICATIONS.
  2. EXPOSED SURFACES TO HAVE A SPONGE FLOAT FINISH.
  3. EXPOSED EDGES TO HAVE A 3/4" CHAMFER.

**RHODE ISLAND DEPARTMENT OF TRANSPORTATION**

**PRECAST CONCRETE APRON STONE  
(FOR SQUARE CATCH BASIN)**

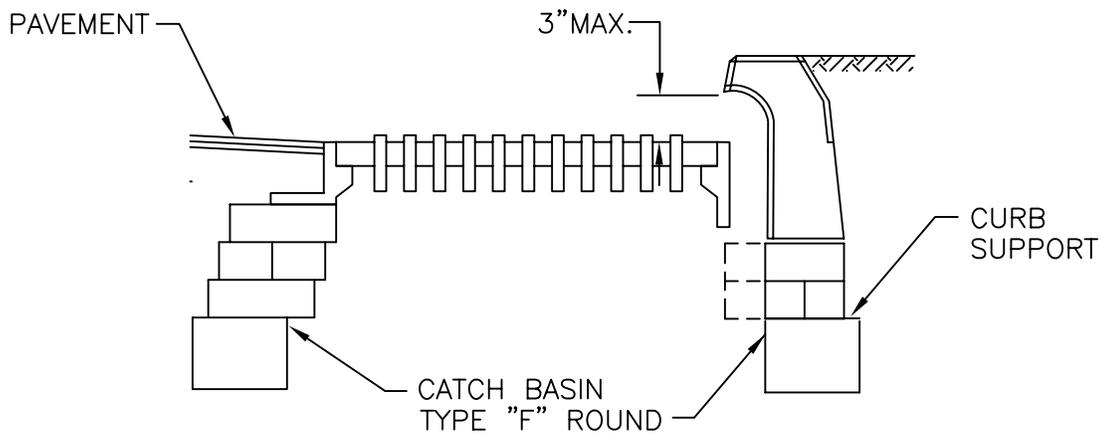
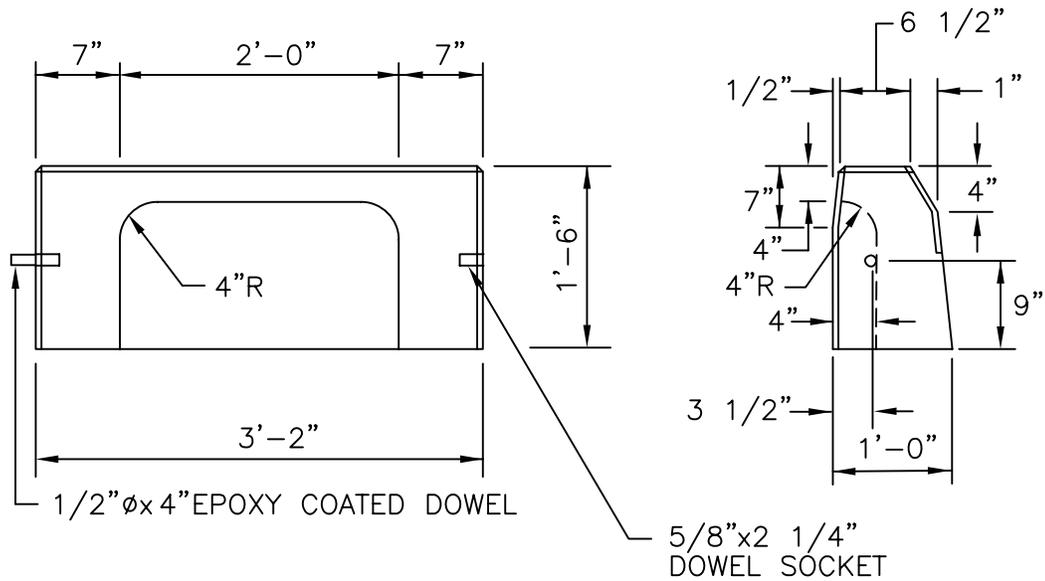
REVISIONS		
NO.	BY	DATE
1	MLP	Mar 05

*James A. Casaldi*  
 CHIEF ENGINEER  
 TRANSPORTATION

*Edmund J. Parker*  
 CHIEF DESIGN ENGINEER  
 TRANSPORTATION

JUNE 15, 1998  
 ISSUE DATE





**NOTES:**

1. SHALL BE IN ACCORDANCE WITH SECTION 906 OF THE R.I. STANDARD SPECIFICATIONS.
2. EXPOSED SURFACES TO HAVE A SPONGE FLOAT FINISH.
3. EXPOSED EDGES TO HAVE A 3/4" CHAMFER.

**RHODE ISLAND DEPARTMENT OF TRANSPORTATION**

**PRECAST CONCRETE APRON STONE  
(FOR ROUND CATCH BASIN)**

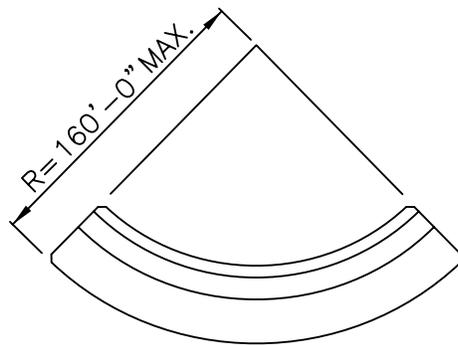
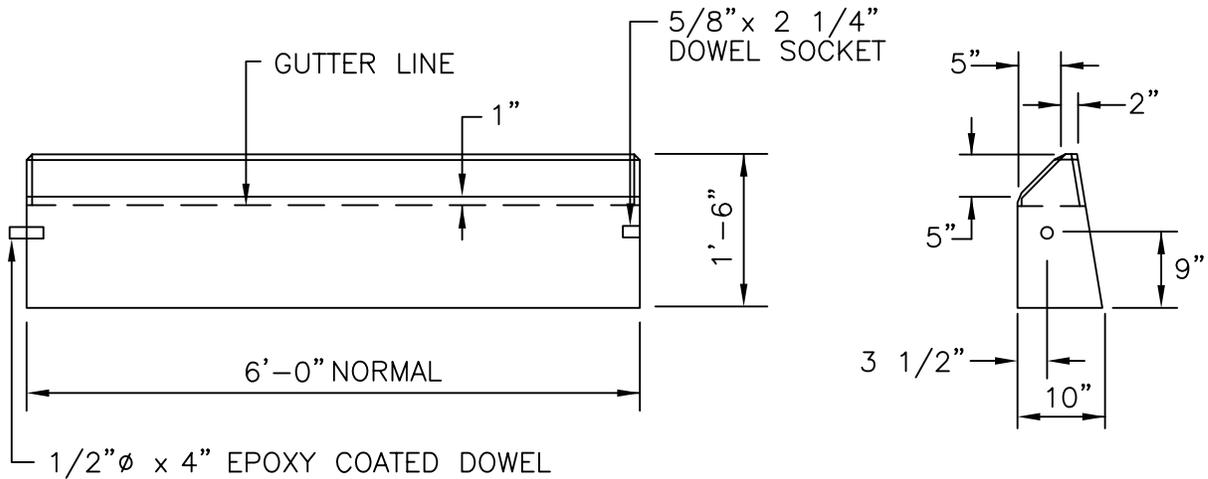
REVISIONS		
NO.	BY	DATE
1	MLP	Mar 05

*James N. Capaldi*  
 CHIEF ENGINEER  
 TRANSPORTATION

*Edmund J. Parker Jr.*  
 CHIEF DESIGN ENGINEER  
 TRANSPORTATION

JUNE 15, 1998  
 ISSUE DATE





CIRCULAR CURB

NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION 906 OF THE R.I. STANDARD SPECIFICATIONS.
2. MINIMUM LENGTH OF STRAIGHT OR CIRCULAR PIECES TO BE 3'-0".
3. EXPOSED SURFACES TO HAVE A SPONGE FLOAT FINISH.
4. EXPOSED EDGES TO HAVE A 3/4" CHAMFER.
5. CIRCULAR CURB IS REQUIRED ON CURVES WITH RADII OF 160'-0" OR LESS. STRAIGHT CURB TO BE USED ON CURVES OF MORE THAN 160'-0" RADIUS.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE
1	MLP	Mar 05

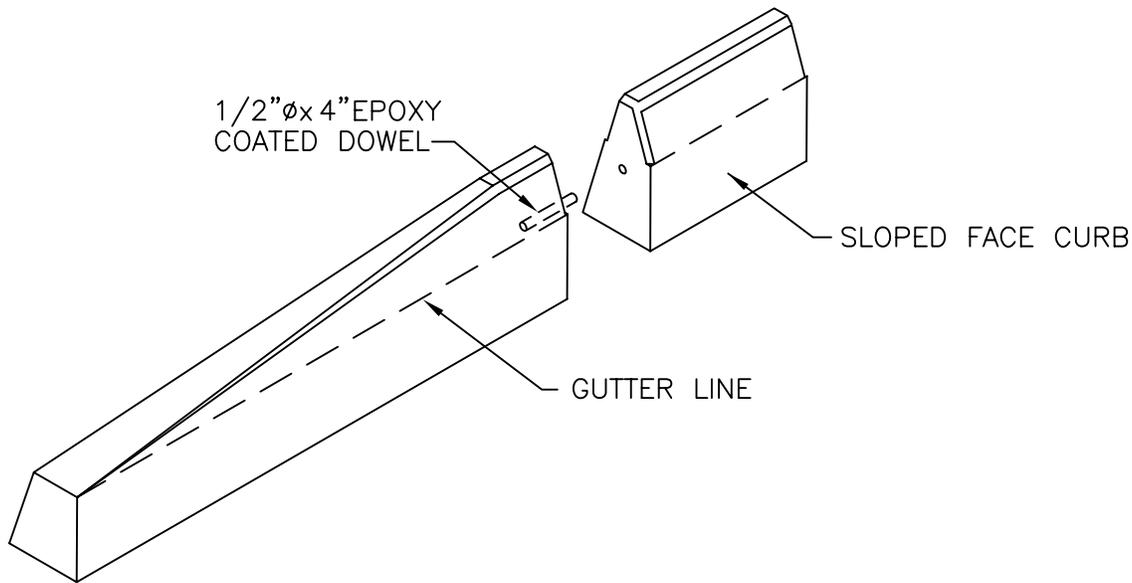
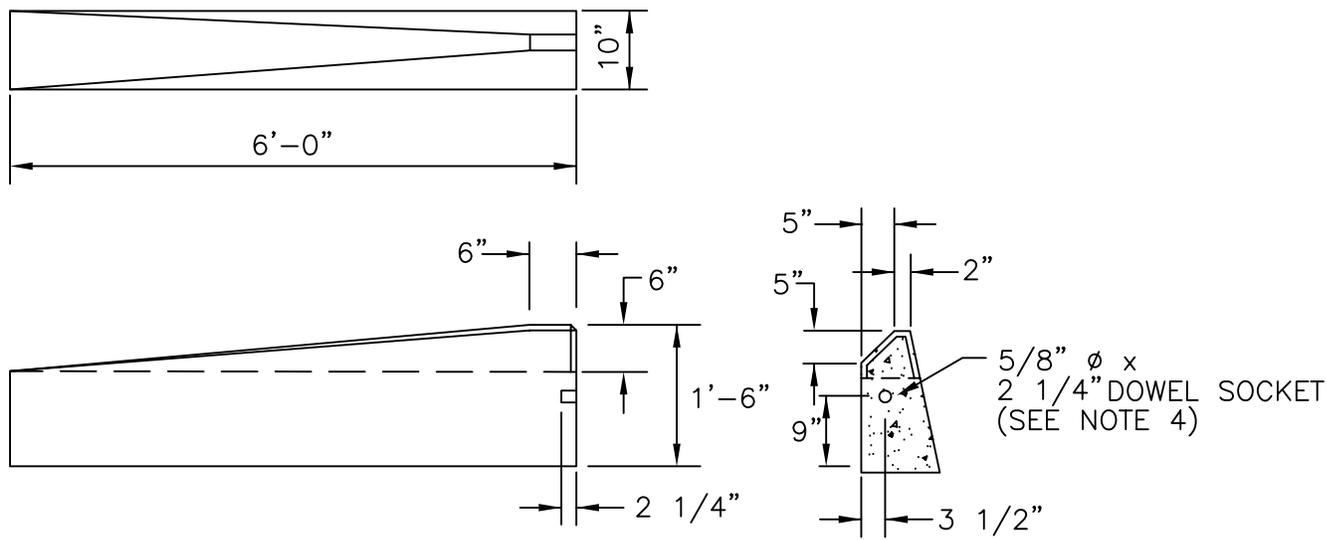
PRECAST CONCRETE  
SLOPED FACE CURB

*James H. Casabadi*  
CHIEF ENGINEER  
TRANSPORTATION

*Edmund J. Parker Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

JUNE 15, 1998  
ISSUE DATE





**NOTES:**

1. SHALL BE IN ACCORDANCE WITH SECTION 906 OF THE R.I. STANDARD SPECIFICATIONS.
2. EXPOSED SURFACES TO HAVE A SPONGE FLOAT FINISH.
3. EXPOSED EDGES TO HAVE A 3/4" CHAMFER.
4. DRAWING SHOWS TRANSITION CURB FOR ONE DIRECTION. FOR OTHER DIRECTION USE OPPOSITE HAND AND INCLUDE A 1/2"  $\phi$  x 4" EPOXY COATED DOWEL.

**RHODE ISLAND DEPARTMENT OF TRANSPORTATION**

**PRECAST CONCRETE  
SLOPED FACE TRANSITION CURB**

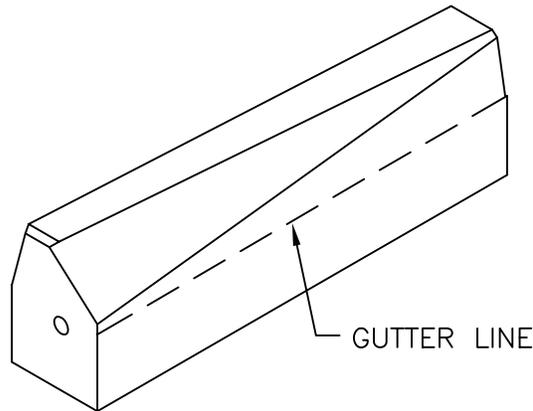
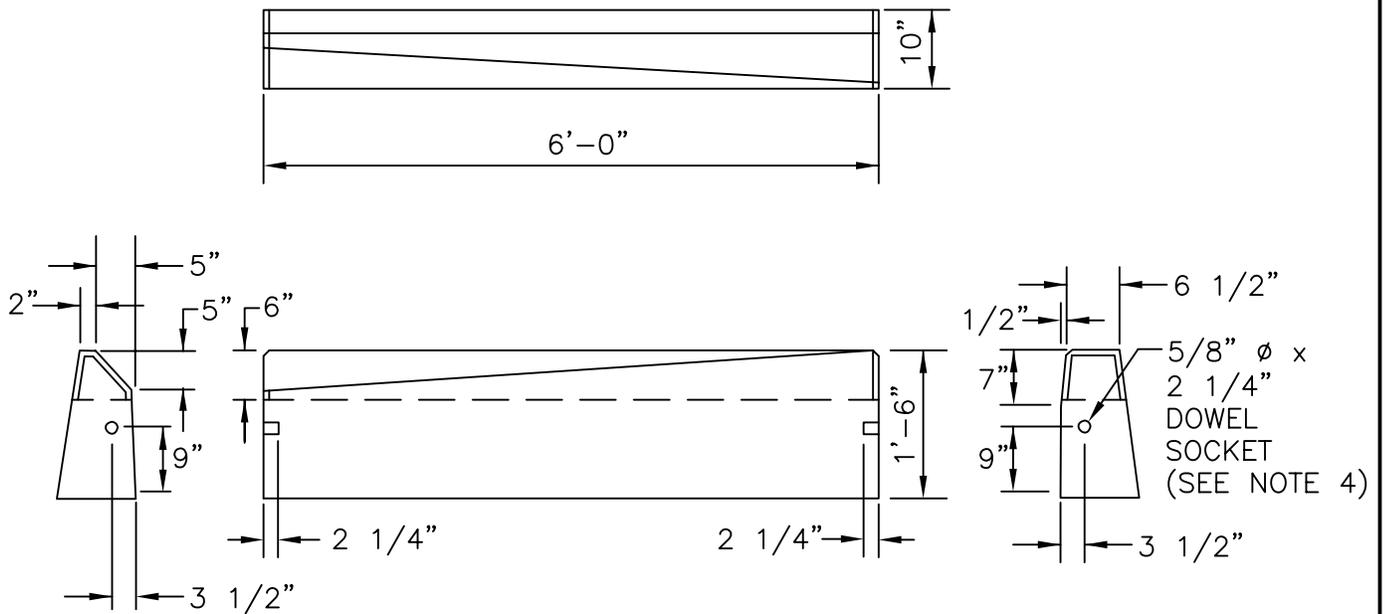
REVISIONS		
NO.	BY	DATE
1	MLP	Mar 05

*James A. Casabedi*  
 CHIEF ENGINEER  
 TRANSPORTATION

*Edmund J. Parker Jr.*  
 CHIEF DESIGN ENGINEER  
 TRANSPORTATION

JUNE 15, 1998  
 ISSUE DATE





**NOTES:**

1. SHALL BE IN ACCORDANCE WITH SECTION 906 OF THE R.I. STANDARD SPECIFICATIONS.
2. EXPOSED SURFACES TO HAVE A SPONGE FLOAT FINISH.
3. EXPOSED EDGES TO HAVE A 3/4" CHAMFER.
4. DRAWING SHOWS TRANSITION CURB FOR ONE DIRECTION. FOR OTHER DIRECTION USE OPPOSITE HAND AND INCLUDE A 1/2"  $\phi$  x 4" EPOXY COATED DOWEL.

**RHODE ISLAND DEPARTMENT OF TRANSPORTATION**

REVISIONS		
NO.	BY	DATE
1	MLP	Mar 05

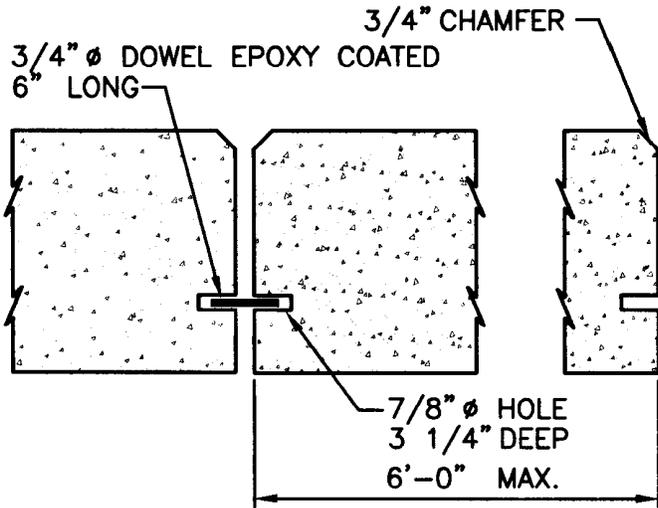
**PRECAST CONCRETE TRANSITION CURB  
(VERTICAL FACE TO SLOPED FACE)**

*James A. Casaldi*  
CHIEF ENGINEER  
TRANSPORTATION

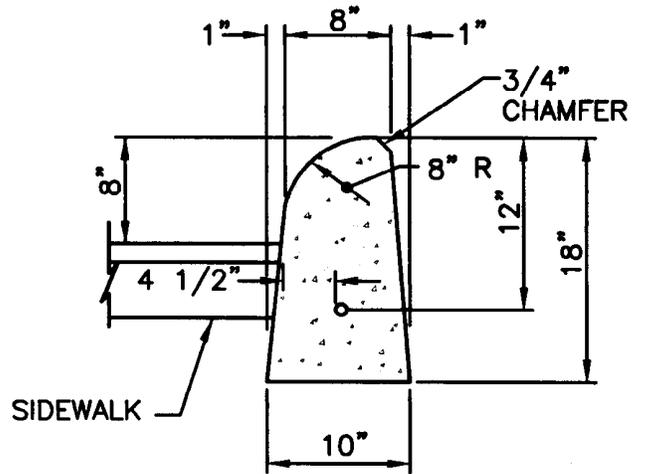
*Edmund J. Parker Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

JUNE 15, 1998  
ISSUE DATE



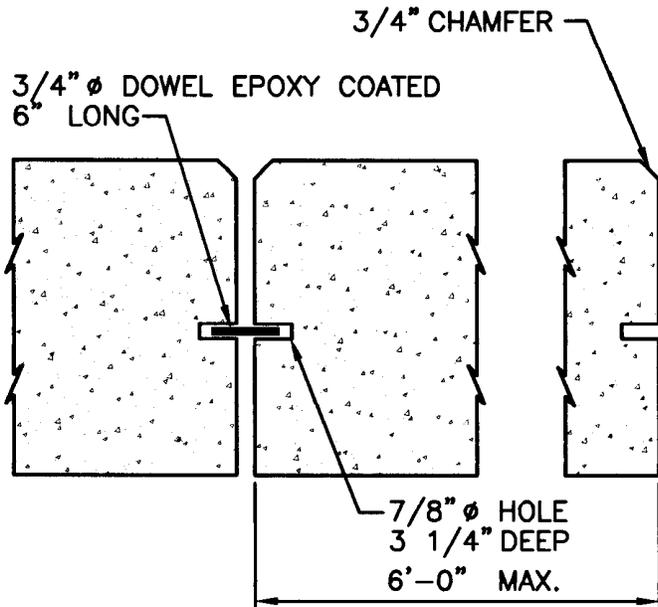


LONGITUDINAL SECTION @ JOINT

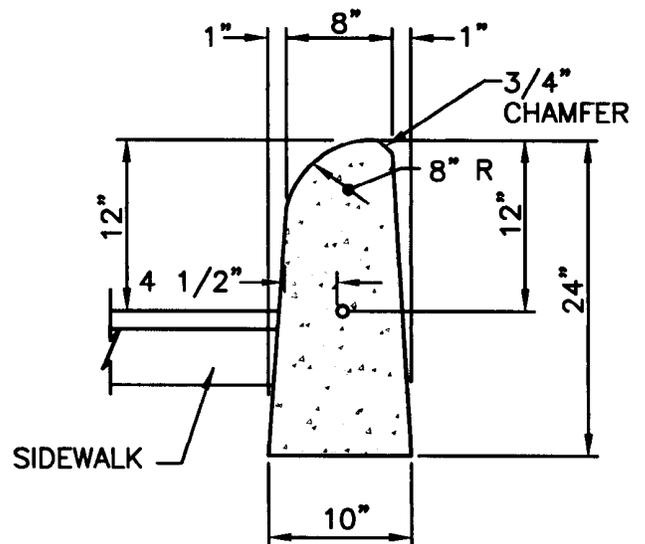


END SECTION

1'-6" LOT CURB



LONGITUDINAL SECTION @ JOINT



END SECTION

2'-0" LOT CURB

NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION 906 OF THE R.I. STANDARD SPECIFICATIONS.
2. 1/8" JOINTS DOWELED WITH A 3/4" Ø DOWEL 6" LONG.
3. TOP AND EXPOSED SURFACES TO H+ 2" TO HAVE A SPONGE FLOAT FINISH.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE

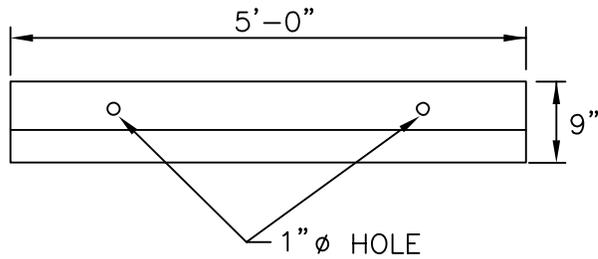
PRECAST CONCRETE LOT CURB

*James A. Casabelli*  
 CHIEF ENGINEER  
 TRANSPORTATION

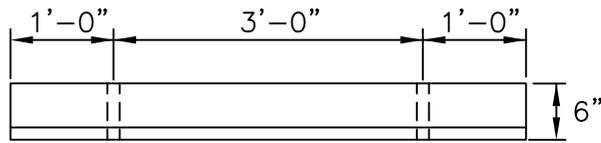
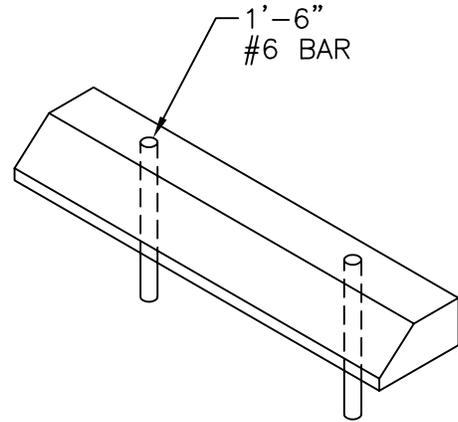
*Edmund Parker Jr.*  
 CHIEF DESIGN ENGINEER  
 TRANSPORTATION

JUNE 15, 1998  
 ISSUE DATE

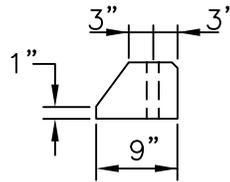




PLAN



FRONT ELEVATION



SIDE ELEVATION

NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION 906 OF THE R.I. STANDARD SPECIFICATIONS.
2. ALL EXPOSED EDGES TO HAVE A 3/4" CHAMFER.
3. ALL SURFACES TO HAVE A SPONGE FLOAT FINISH.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE
1	MLP	Mar 05

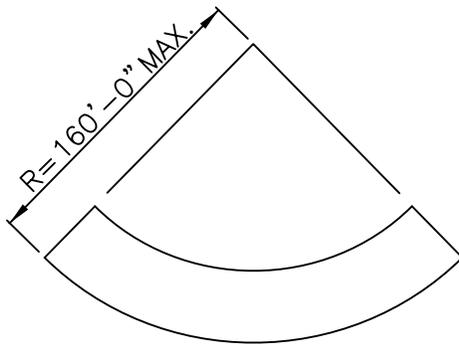
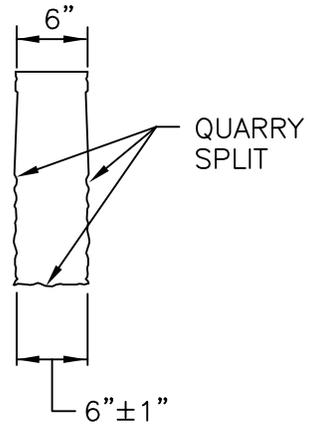
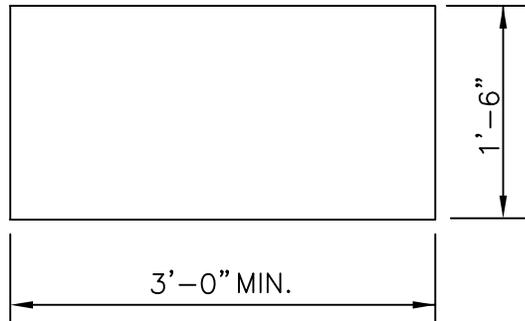
PRECAST CONCRETE CAR STOPS

*James A. Casabelli*  
 CHIEF ENGINEER  
 TRANSPORTATION

*Edmund J. Parker Jr.*  
 CHIEF DESIGN ENGINEER  
 TRANSPORTATION

JUNE 15, 1998  
 ISSUE DATE





CIRCULAR CURB

NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION 906 OF THE R.I. STANDARD SPECIFICATIONS.
2. TOP SURFACE TO BE DRESSED BY SAW. REMAINDER TO BE QUARRY SPLIT.
3. MINIMUM LENGTH OF STRAIGHT OR CIRCULAR PIECES TO BE 3'-0".
4. CIRCULAR CURB IS REQUIRED ON CURVES WITH RADII OF 160'-0" OR LESS. STRAIGHT CURB TO BE USED ON CURVES OF MORE THAN 160'-0" RADIUS.

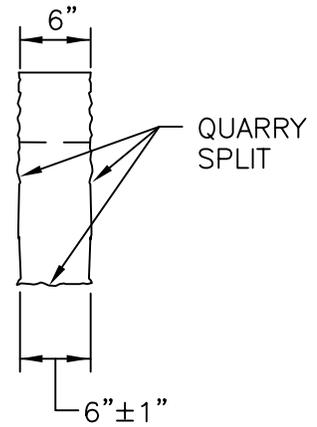
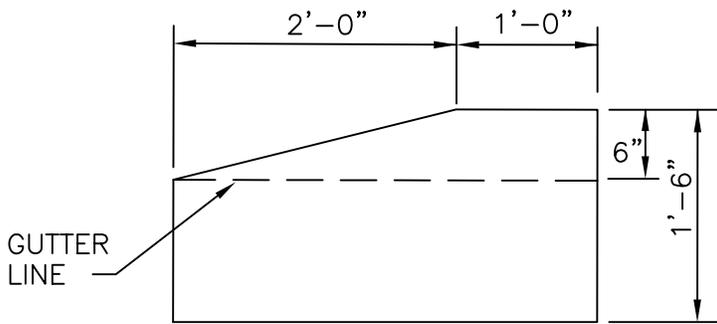
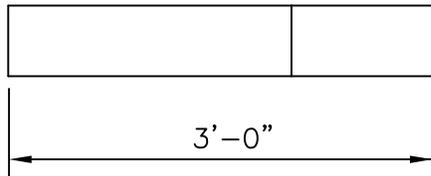
RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS			GRANITE CURB	R.I. STANDARD 7.3.0
NO.	BY	DATE		
1	MLP	Mar 05		

*James H. Casaldi*  
 CHIEF ENGINEER  
 TRANSPORTATION

*Edmund Perkins Jr.*  
 CHIEF DESIGN ENGINEER  
 TRANSPORTATION

JUNE 15, 1998  
 ISSUE DATE



NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION 906 OF THE R.I. STANDARD SPECIFICATIONS.
2. TOP SURFACE TO BE DRESSED BY SAW. REMAINDER TO BE QUARRY SPLIT.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE
1	MLP	Mar 05

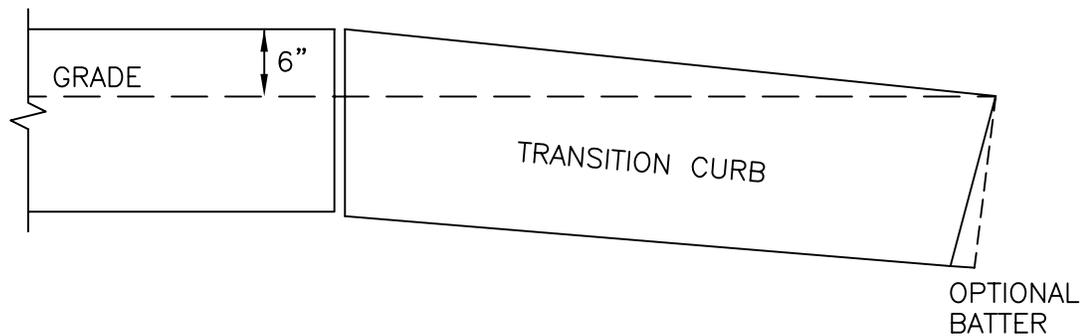
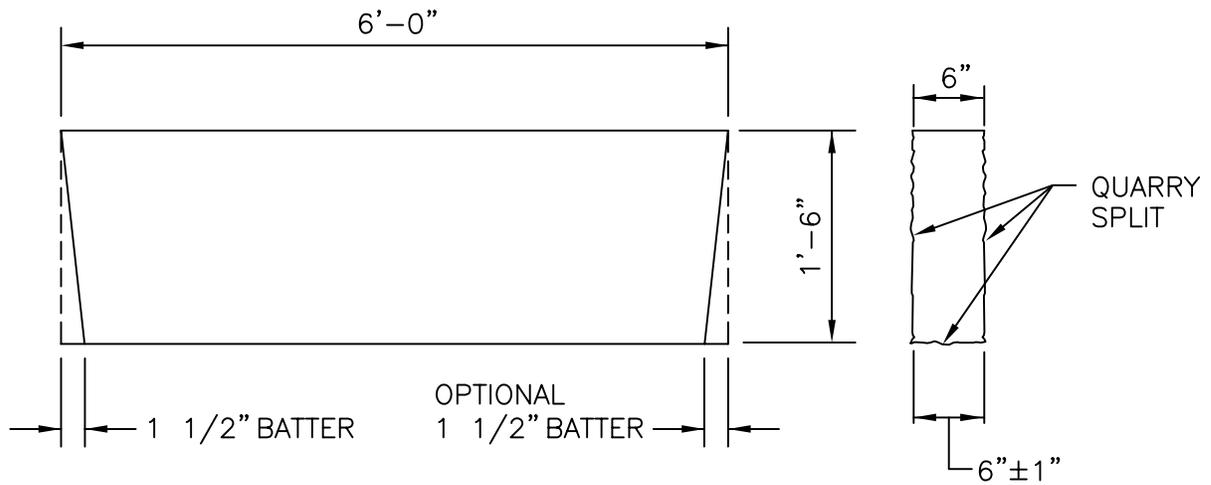
3'-0" GRANITE TRANSITION CURB

*James A. Capaldi*  
 CHIEF ENGINEER  
 TRANSPORTATION

*Edmund J. Perkins Jr.*  
 CHIEF DESIGN ENGINEER  
 TRANSPORTATION

JUNE 15, 1998  
 ISSUE DATE





**NOTES:**

1. SHALL BE IN ACCORDANCE WITH SECTION 906 OF THE R.I. STANDARD SPECIFICATIONS.
2. THE CONTRACTOR MAY CUT EXISTING CURB SECTIONS AS REQUIRED TO MEET THIS DETAIL AND THE R.I. STANDARD SPECIFICATIONS, WHERE OLD CURBING IS BEING REUSED.
3. TOP SURFACE TO BE DRESSED BY SAW. REMAINDER TO BE QUARRY SPLIT.

**RHODE ISLAND DEPARTMENT OF TRANSPORTATION**

REVISIONS		
NO.	BY	DATE
1	MLP	Mar 05

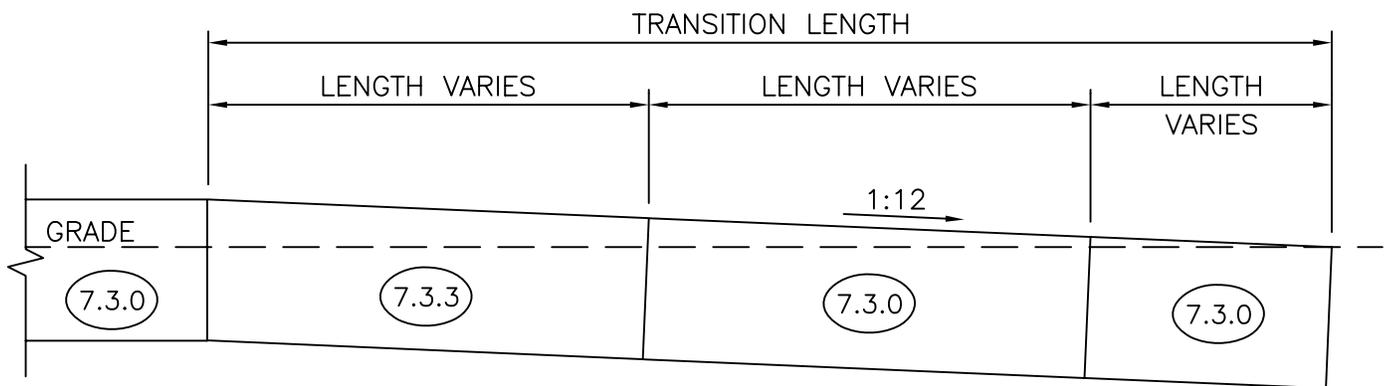
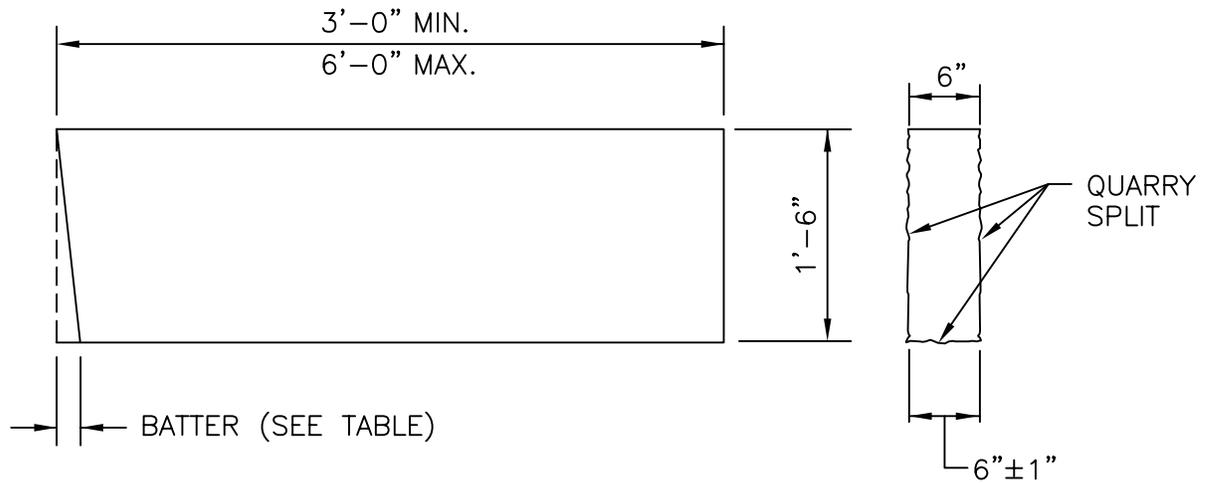
**6'-0" GRANITE TRANSITION CURB**

*James H. Casaldi*  
 CHIEF ENGINEER  
 TRANSPORTATION

*Edmund J. Parker Jr.*  
 CHIEF DESIGN ENGINEER  
 TRANSPORTATION

JUNE 15, 1998  
 ISSUE DATE





TRANSITION LENGTH (FT.)	BATTER (IN.)
6.0	1.5
7.0	1.3
8.0	1.2
9.5	1.0
11.5	0.8
15.0	0.6
18.0	0.5

**NOTES:**

1. SHALL BE IN ACCORDANCE WITH SECTION 906 OF THE R.I. STANDARD SPECIFICATIONS.
2. THE CONTRACTOR MAY CUT EXISTING CURB SECTIONS AS REQUIRED TO MEET THIS DETAIL AND THE R.I. STANDARD SPECIFICATIONS, WHERE OLD CURBING IS BEING REUSED.
3. MINIMUM LENGTH OF STRAIGHT OR CIRCULAR CURB FILLER PIECES TO BE 3'-0" (GREATER LENGTHS PREFERRED).
4. TOP SURFACE TO BE DRESSED BY SAW. REMAINDER TO BE QUARRY SPLIT.

**RHODE ISLAND DEPARTMENT OF TRANSPORTATION**

**GRANITE WHEELCHAIR RAMP  
TRANSITION CURB**

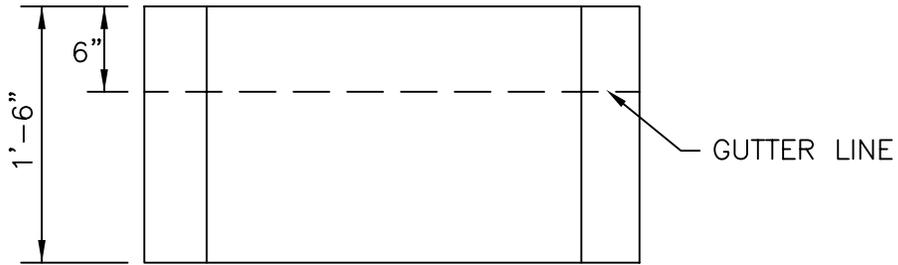
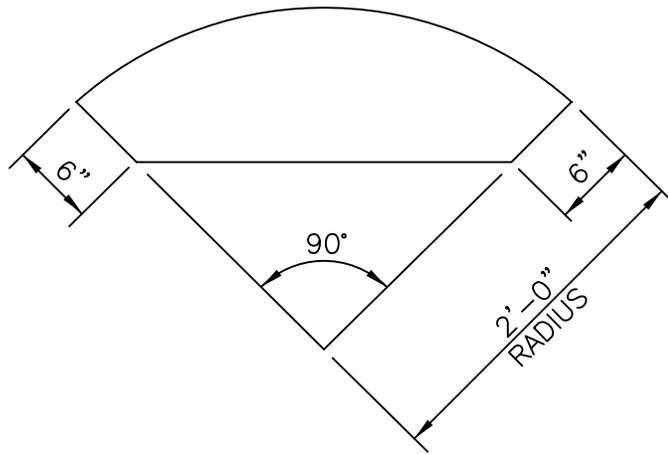
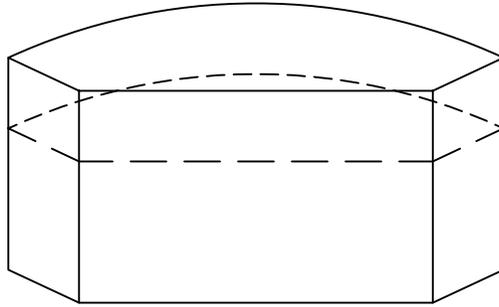
REVISIONS		
NO.	BY	DATE
1	MLP	Mar 05

*James H. Casaldi*  
CHIEF ENGINEER  
TRANSPORTATION

*Edmund J. Parker Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

JUNE 15, 1998  
ISSUE DATE





**NOTES:**

1. SHALL BE IN ACCORDANCE WITH SECTION 906 OF THE R.I. STANDARD SPECIFICATIONS.
2. TOP SURFACE TO BE DRESSED BY SAW. REMAINDER TO BE QUARRY SPLIT.

**RHODE ISLAND DEPARTMENT OF TRANSPORTATION**

**GRANITE 2'-0" RADIUS CORNER**

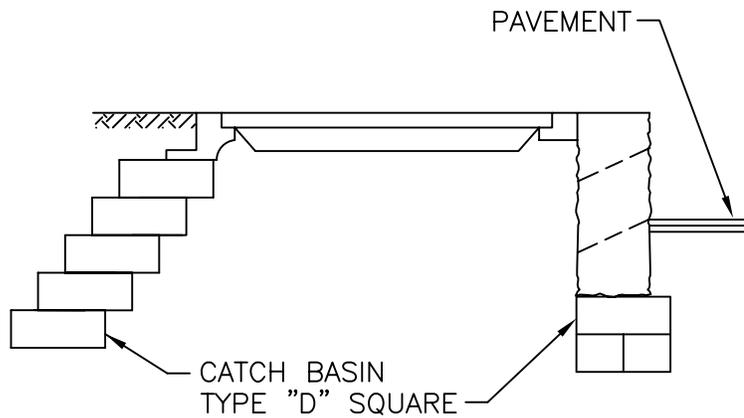
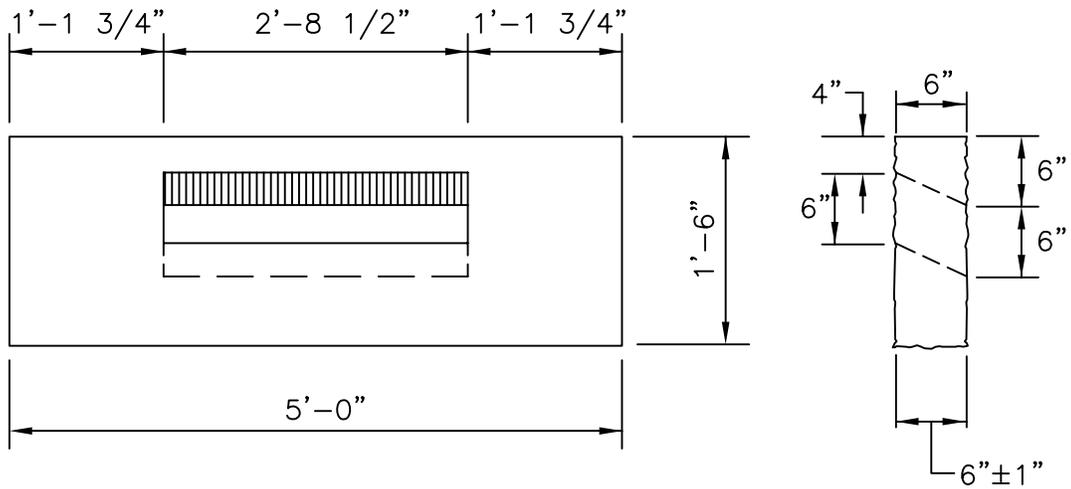
REVISIONS		
NO.	BY	DATE
1	MLP	Mar 05

*James H. Casaldi*  
 CHIEF ENGINEER  
 TRANSPORTATION

*Edmund J. Parker Jr.*  
 CHIEF DESIGN ENGINEER  
 TRANSPORTATION

JUNE 15, 1998  
 ISSUE DATE





**NOTES:**

1. SHALL BE IN ACCORDANCE WITH SECTION 906 OF THE R.I. STANDARD SPECIFICATIONS.
2. TOP SURFACE TO BE DRESSED BY SAW. REMAINDER TO BE QUARRY SPLIT.

**RHODE ISLAND DEPARTMENT OF TRANSPORTATION**

REVISIONS		
NO.	BY	DATE
1	MLP	Mar 05

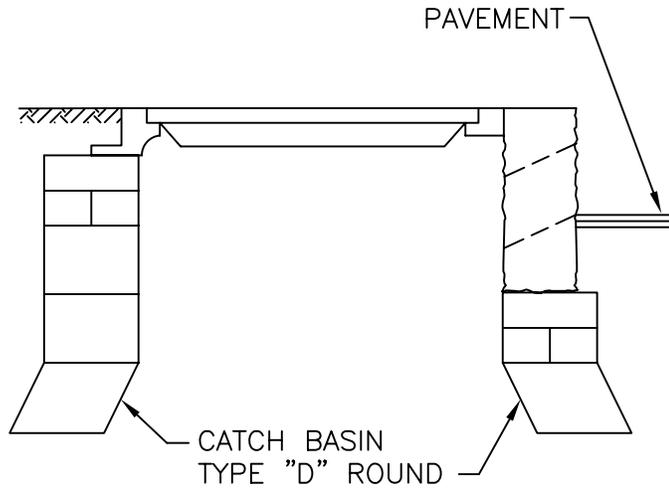
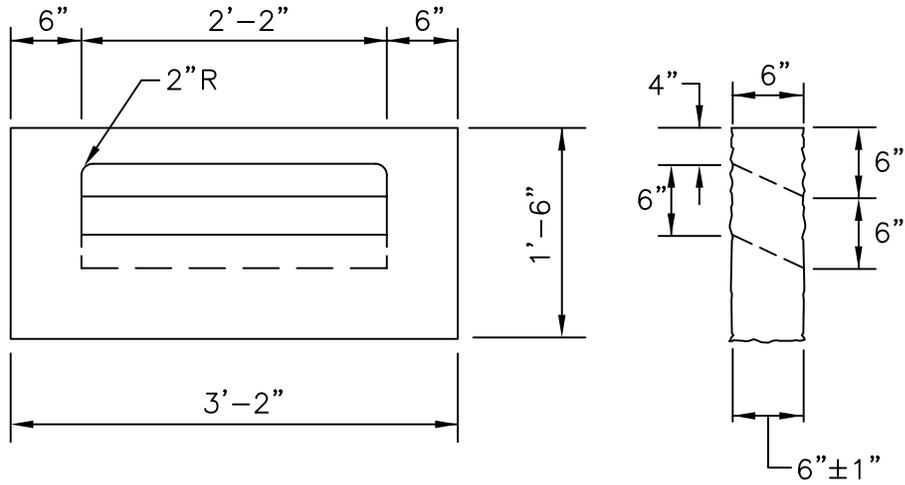
**GRANITE INLET STONE  
(FOR SQUARE CATCH BASIN)**

*James A. Capaldi*  
CHIEF ENGINEER  
TRANSPORTATION

*Edmund J. Parker Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

JUNE 15, 1998  
ISSUE DATE





**NOTES:**

1. SHALL BE IN ACCORDANCE WITH SECTION 906 OF THE R.I. STANDARD SPECIFICATIONS.
2. TOP SURFACE TO BE DRESSED BY SAW. REMAINDER TO BE QUARRY SPLIT.

**RHODE ISLAND DEPARTMENT OF TRANSPORTATION**

REVISIONS		
NO.	BY	DATE
1	MLP	Mar 05

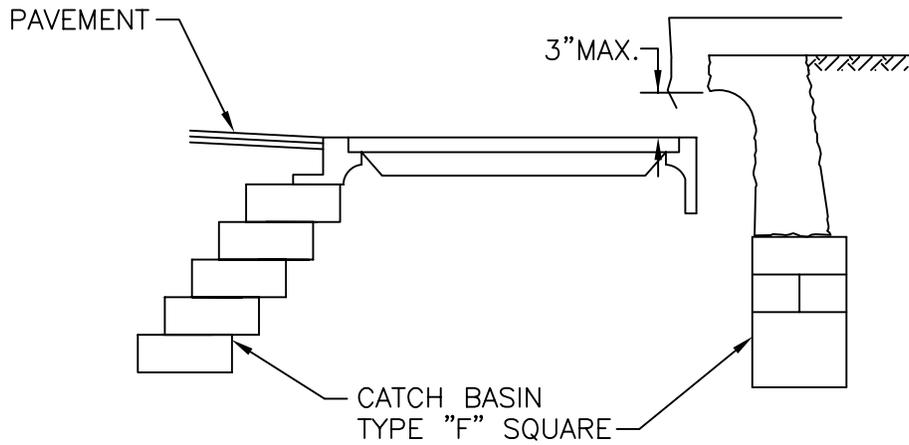
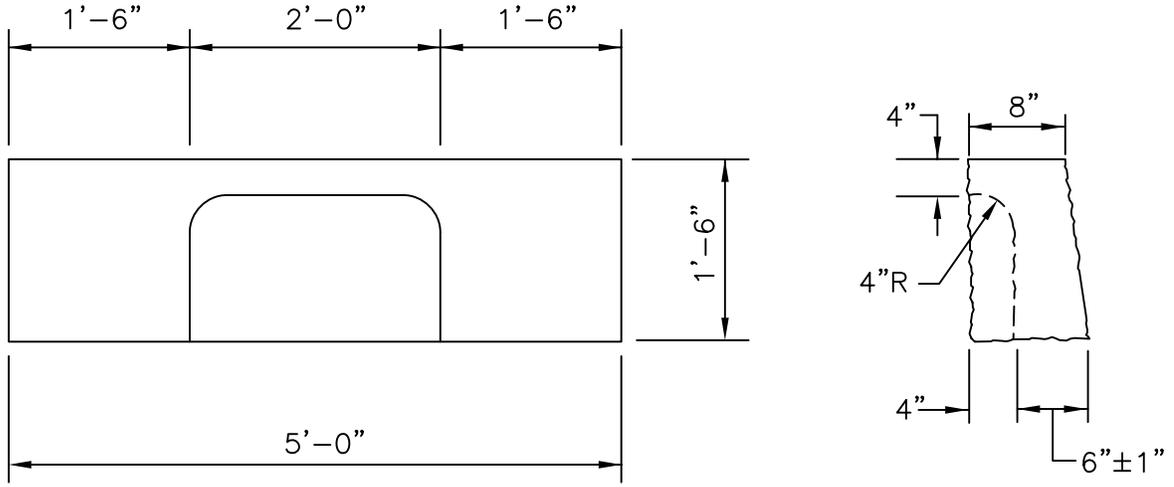
**GRANITE INLET STONE  
(FOR ROUND CATCH BASIN)**

*James R. Casaldi*  
CHIEF ENGINEER  
TRANSPORTATION

*Edmund J. Parker Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

JUNE 15, 1998  
ISSUE DATE





**NOTES:**

1. SHALL BE IN ACCORDANCE WITH SECTION 906 OF THE R.I. STANDARD SPECIFICATIONS.
2. TOP SURFACE TO BE DRESSED BY SAW. REMAINDER TO BE QUARRY SPLIT.

**RHODE ISLAND DEPARTMENT OF TRANSPORTATION**

REVISIONS		
NO.	BY	DATE
1	MLP	Mar 05

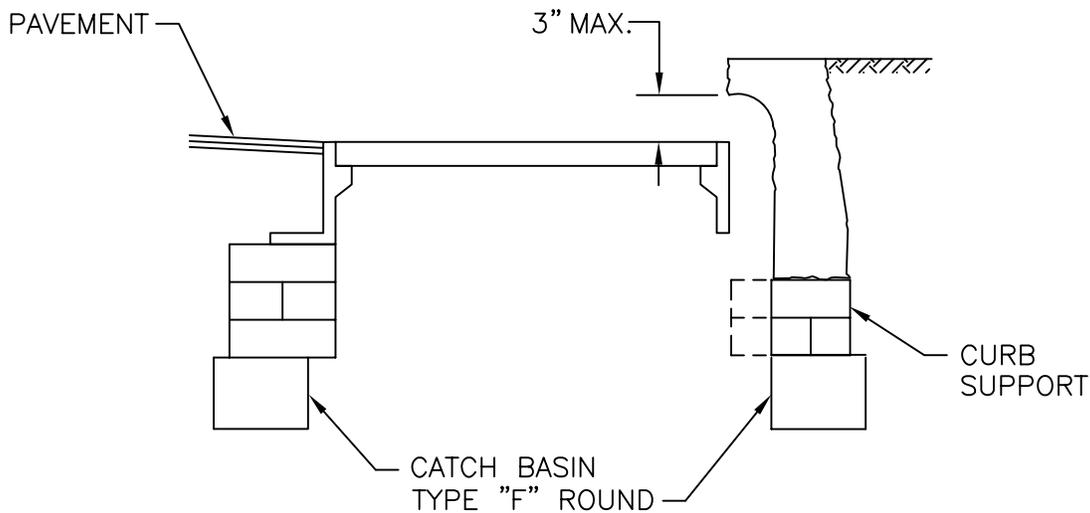
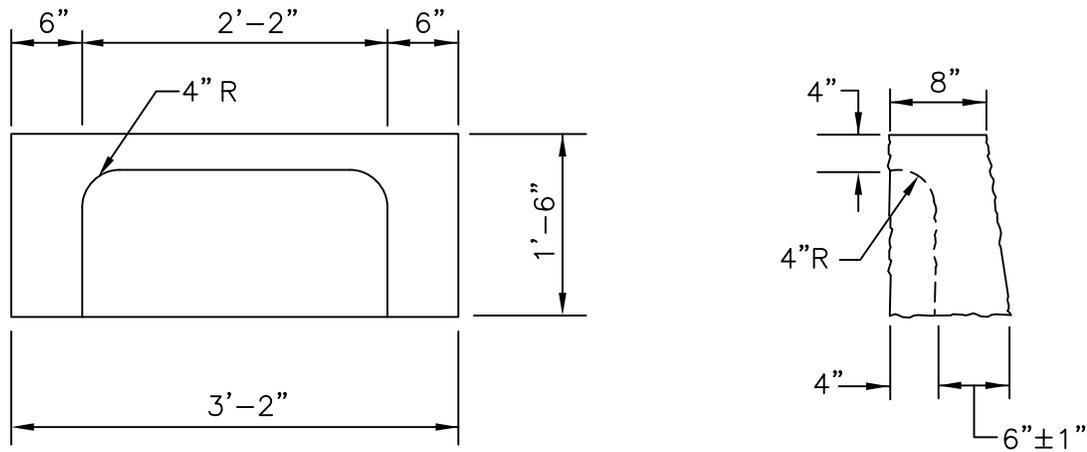
**GRANITE APRON STONE  
(FOR SQUARE CATCH BASIN)**

*James A. Casaldi*  
CHIEF ENGINEER  
TRANSPORTATION

*Edmund Parker Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

JUNE 15, 1998  
ISSUE DATE





**NOTES:**

1. SHALL BE IN ACCORDANCE WITH SECTION 906 OF THE R.I. STANDARD SPECIFICATIONS.
2. TOP SURFACE TO BE DRESSED BY SAW. REMAINDER TO BE QUARRY SPLIT.

**RHODE ISLAND DEPARTMENT OF TRANSPORTATION**

**GRANITE APRON STONE  
(FOR ROUND CATCH BASIN)**

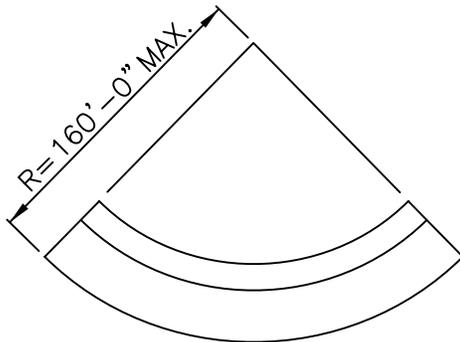
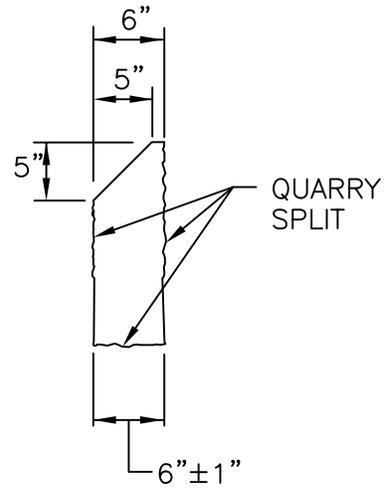
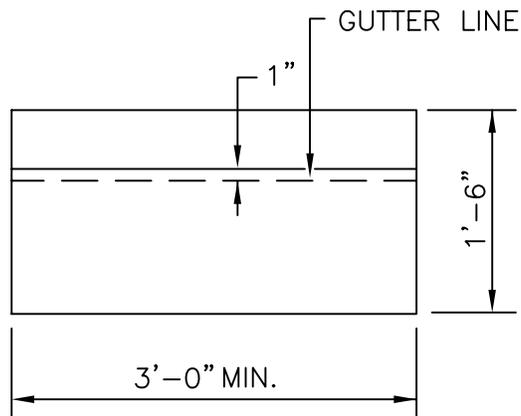
REVISIONS		
NO.	BY	DATE
1	MLP	Mar 05

*James R. Capaldi*  
CHIEF ENGINEER  
TRANSPORTATION

*Edmund J. Parker Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

JUNE 15, 1998  
ISSUE DATE





CIRCULAR CURB

NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION 906 OF THE R.I. STANDARD SPECIFICATIONS.
2. TOP SURFACE AND SLOPED SURFACE TO BE DRESSED BY SAW. REMAINDER TO BE QUARRY SPLIT.
3. MINIMUM LENGTH OF STRAIGHT OR CIRCULAR PIECES TO BE 3'-0".
4. CIRCULAR CURB IS REQUIRED ON CURVES WITH RADII OF 160'-0" OR LESS. STRAIGHT CURB TO BE USED ON CURVES OF MORE THAN 160'-0" RADIUS.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE
1	MLP	Mar 05

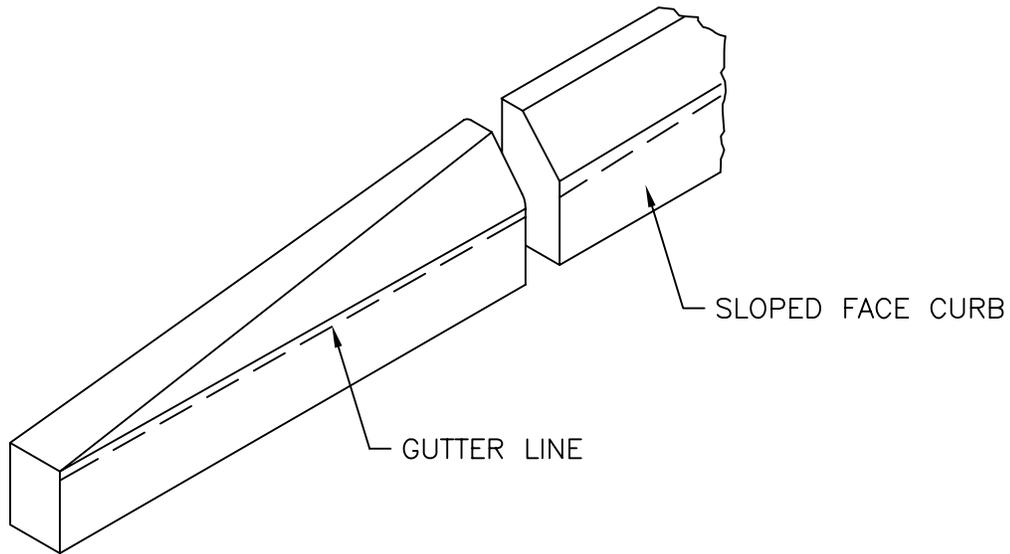
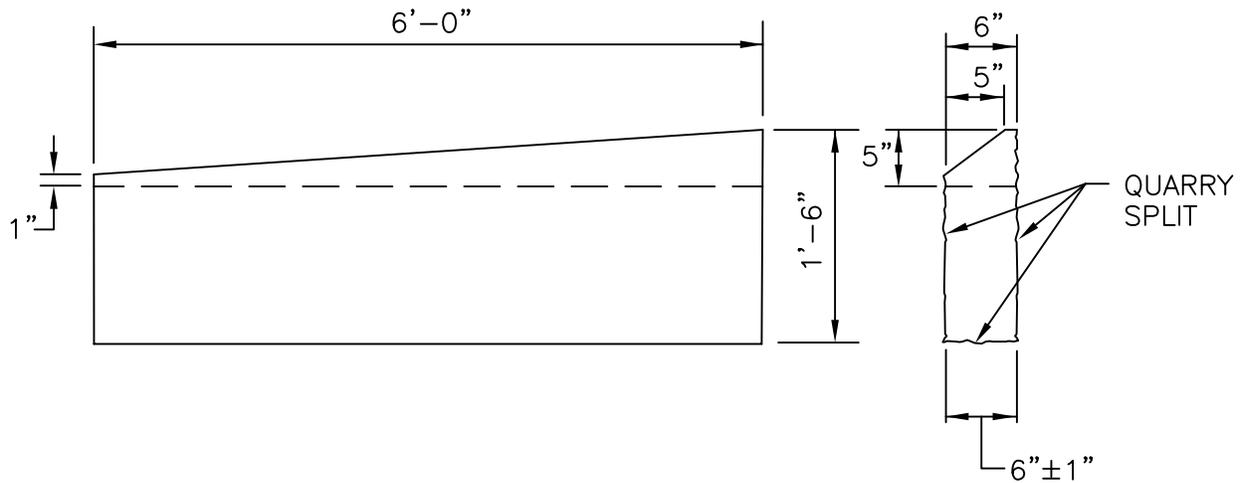
GRANITE SLOPED FACE CURB

*James A. Capaldi*  
 CHIEF ENGINEER  
 TRANSPORTATION

*Edmund Parker Jr.*  
 CHIEF DESIGN ENGINEER  
 TRANSPORTATION

JUNE 15, 1998  
 ISSUE DATE





**NOTES:**

1. SHALL BE IN ACCORDANCE WITH SECTION 906 OF THE R.I. STANDARD SPECIFICATIONS.
2. TOP SURFACE AND SLOPED SURFACE TO BE DRESSED BY SAW. REMAINDER TO BE QUARRY SPLIT.
3. DRAWING SHOWS TRANSITION CURB FOR ONE DIRECTION. FOR OTHER DIRECTION USE OPPOSITE HAND.

**RHODE ISLAND DEPARTMENT OF TRANSPORTATION**

**GRANITE  
SLOPED FACE TRANSITION CURB**

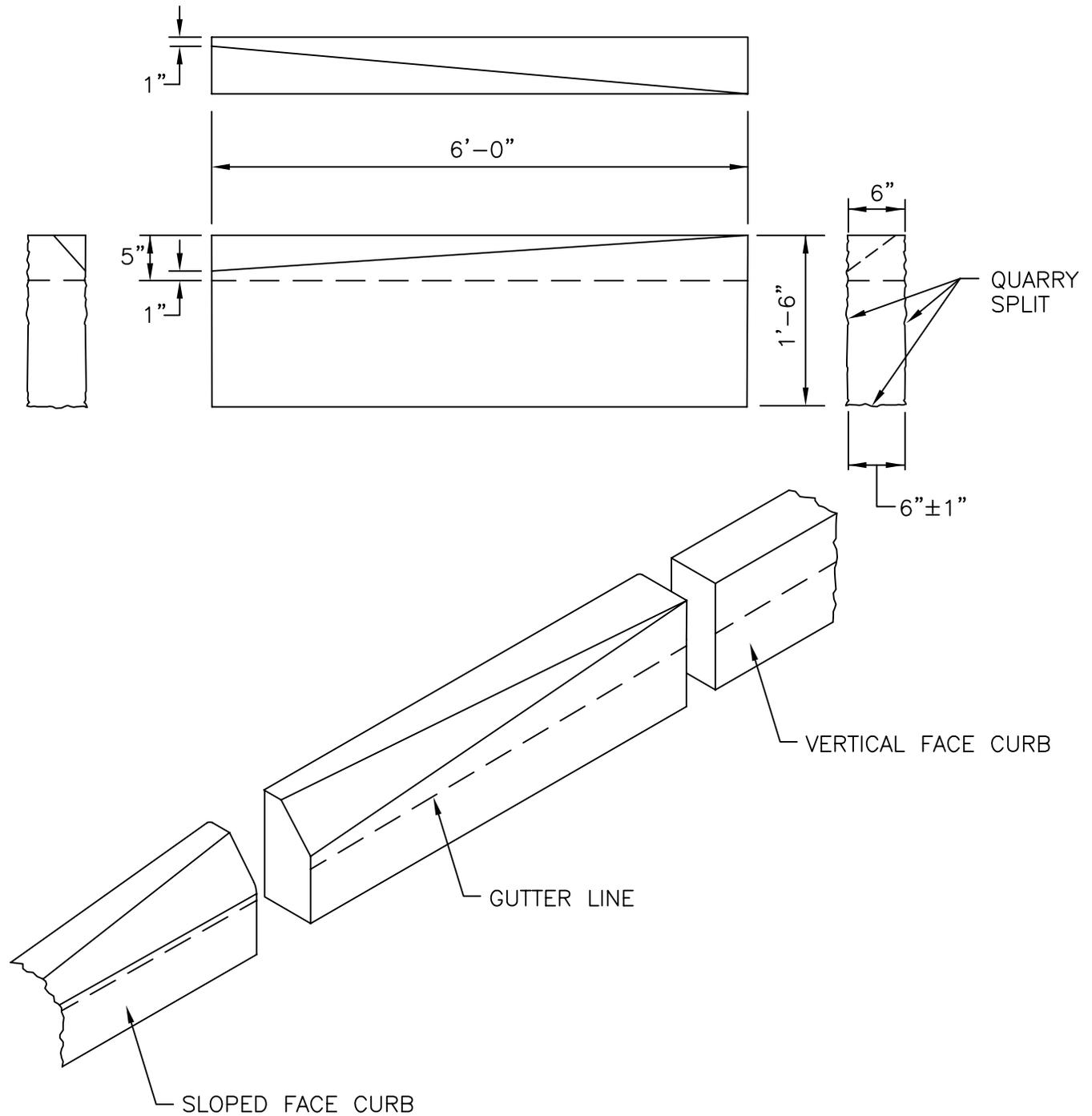


REVISIONS		
NO.	BY	DATE
1	MLP	Mar 05

*James H. Casaboli*  
CHIEF ENGINEER  
TRANSPORTATION

*Edmund Parker Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

JUNE 15, 1998  
ISSUE DATE



**NOTES:**

1. SHALL BE IN ACCORDANCE WITH SECTION 906 OF THE R.I. STANDARD SPECIFICATIONS.
2. TOP SURFACE AND SLOPED SURFACE TO BE DRESSED BY SAW. REMAINDER TO BE QUARRY SPLIT.
3. DRAWING SHOWS TRANSITION CURB FOR ONE DIRECTION. FOR OTHER DIRECTION USE OPPOSITE HAND.

**RHODE ISLAND DEPARTMENT OF TRANSPORTATION**

**GRANITE TRANSITION CURB  
(VERTICAL FACE TO SLOPED FACE)**

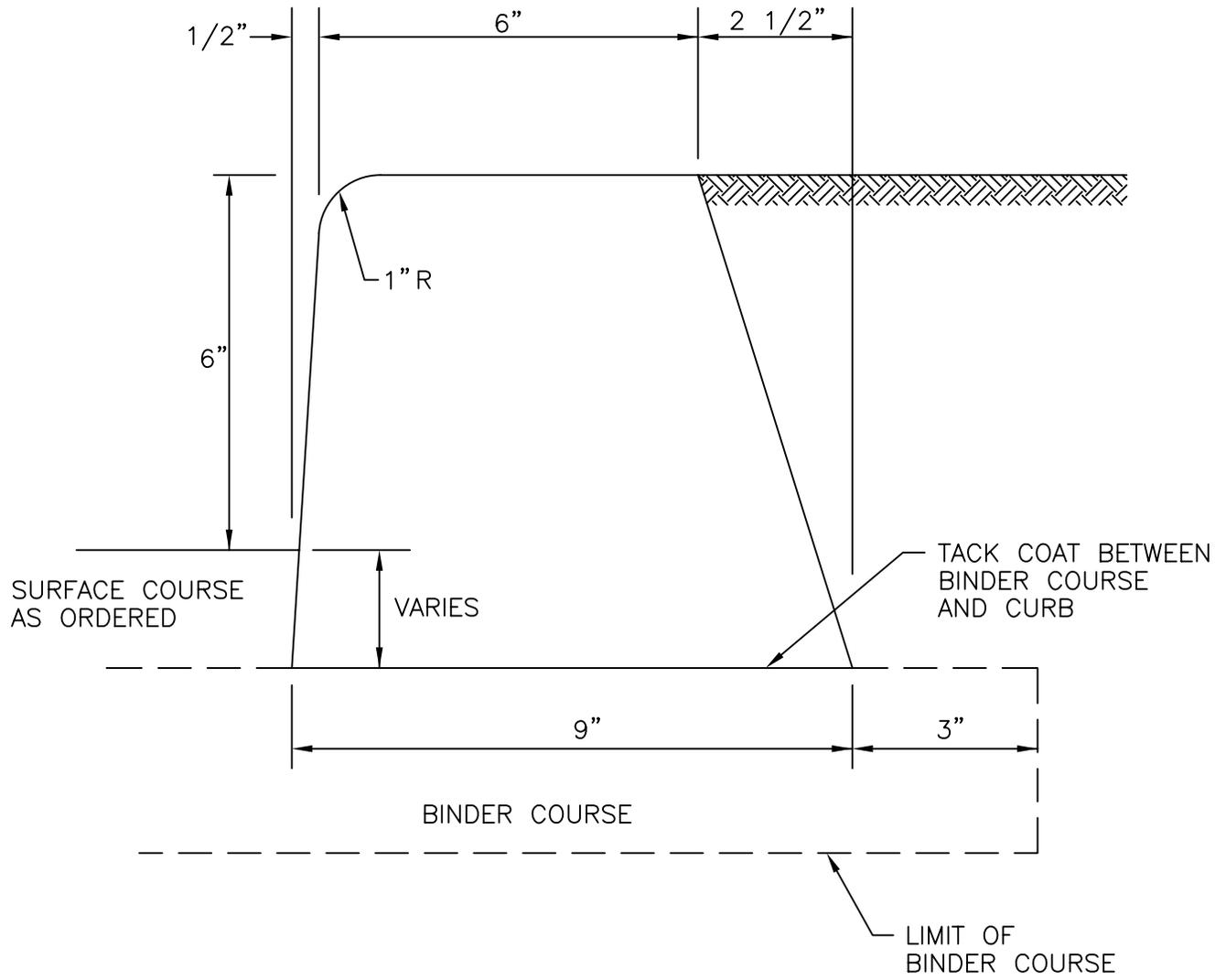
REVISIONS		
NO.	BY	DATE
1	MLP	Mar 05

*James R. Casaldi*  
CHIEF ENGINEER  
TRANSPORTATION

*Edmund J. Perkins Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

JUNE 15, 1998  
ISSUE DATE





NOTE:  
SHALL BE IN ACCORDANCE WITH SECTION 906 OF THE R.I. STANDARD SPECIFICATIONS.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE
1	MLP	Mar 05

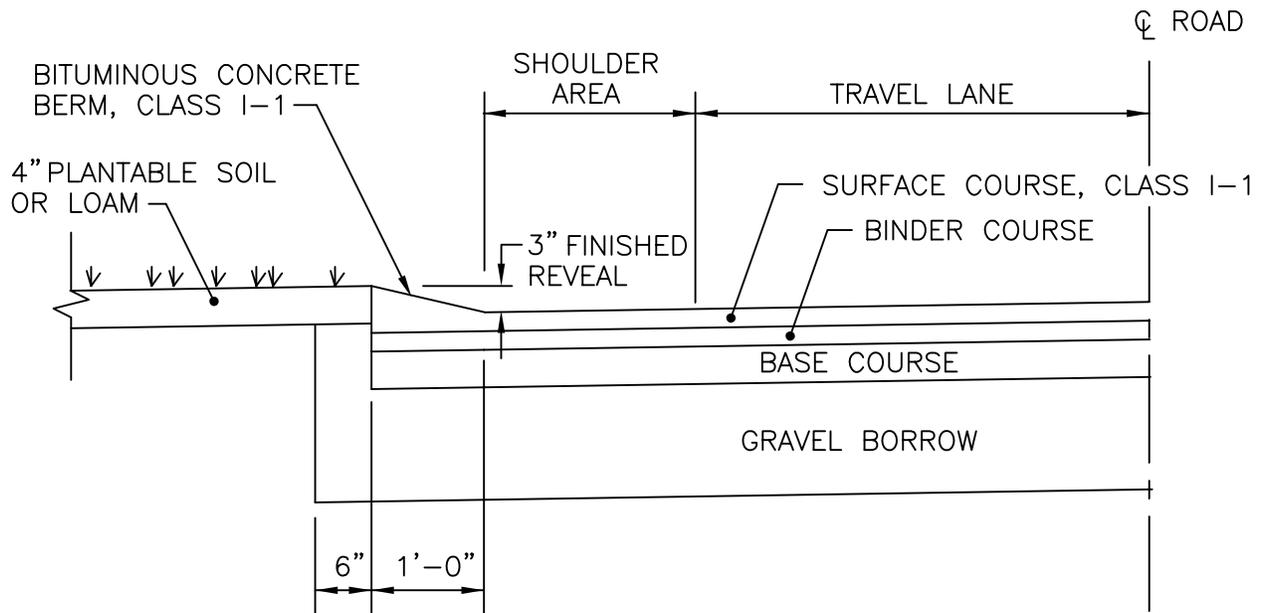
BITUMINOUS CONCRETE LIP CURB

*James A. Casaldi*  
CHIEF ENGINEER  
TRANSPORTATION

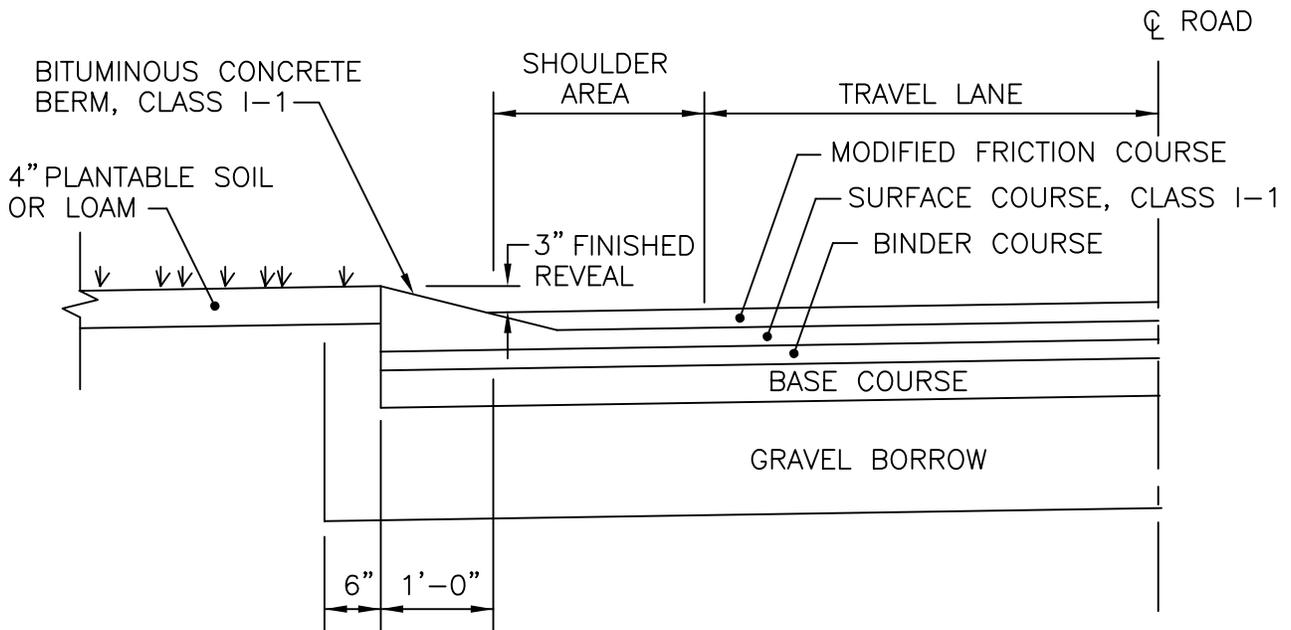
*Edmund J. Parker Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

JUNE 15, 1998  
ISSUE DATE





**CONSTRUCTION METHOD A**



**CONSTRUCTION METHOD B**

**NOTES:**

1. SHALL BE IN ACCORDANCE WITH SECTION 906 OF THE R.I. STANDARD SPECIFICATIONS.
2. BITUMINOUS BERM CAN BE PLACED AT THE SAME TIME THAT THE SURFACE COURSE LAYER IS PLACED ON THE PROJECT ROADWAY, OR IT CAN BE INSTALLED IN A SEPARATE OPERATION.

**RHODE ISLAND DEPARTMENT OF TRANSPORTATION**

REVISIONS		
NO.	BY	DATE
1	MLP	Mar 05

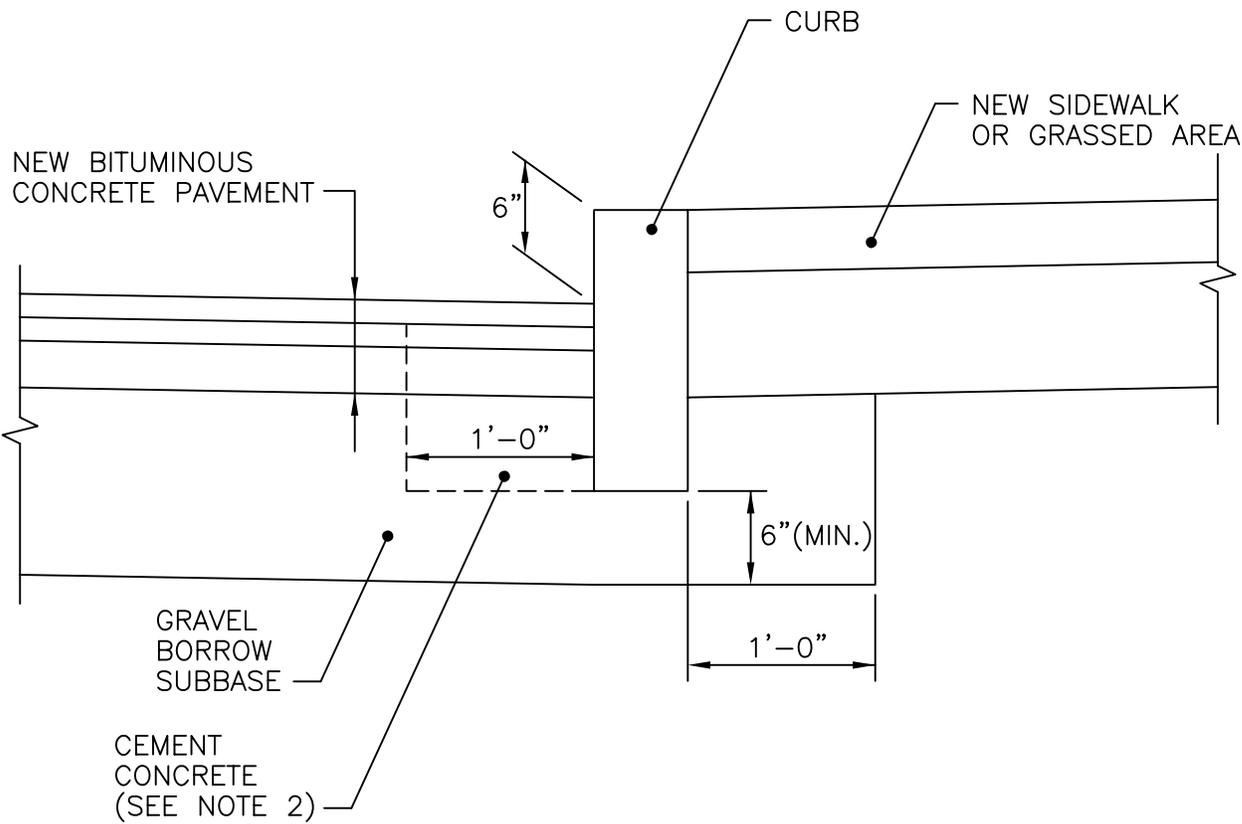
**BITUMINOUS BERM**

*James N. Casaldi*  
 CHIEF ENGINEER  
 TRANSPORTATION

*Edmund J. Perkins Jr.*  
 CHIEF DESIGN ENGINEER  
 TRANSPORTATION

JUNE 15, 1998  
 ISSUE DATE





**NOTES:**

1. SHALL BE IN ACCORDANCE WITH SECTION 906 OF THE R.I. STANDARD SPECIFICATIONS.
2. CEMENT CONCRETE SHALL BE USED ONLY WHEN THE CURB IS SET AFTER THE BASE AND/OR BINDER COURSES ARE IN PLACE, OTHERWISE THE CEMENT CONCRETE WILL BE ELIMINATED AND THE GRAVEL BROUGHT UP TO BOTTOM OF THE BASE COURSE.

**RHODE ISLAND DEPARTMENT OF TRANSPORTATION**

REVISIONS		
NO.	BY	DATE
1	MLP	Mar 05

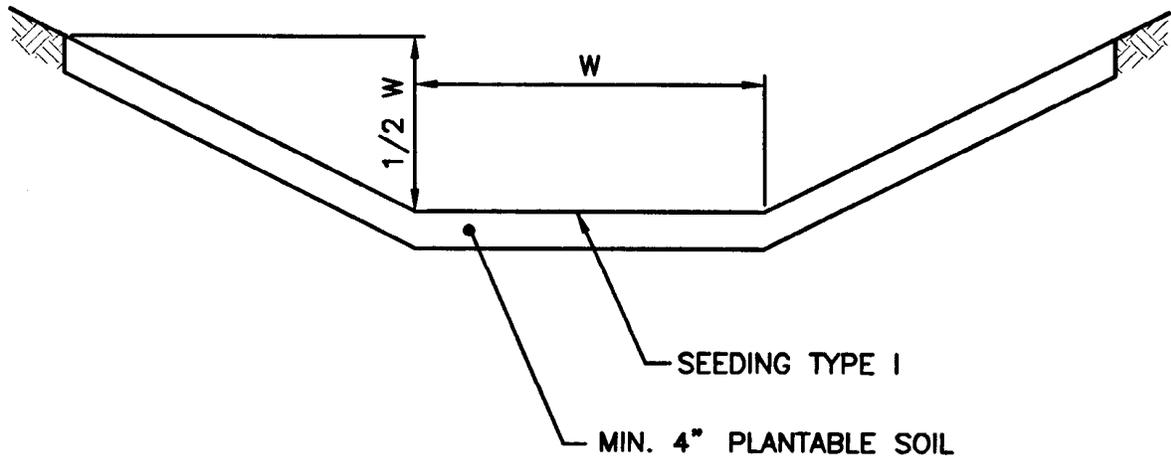
**CURB SETTING DETAIL**

  
CHIEF ENGINEER  
TRANSPORTATION

  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

JUNE 15, 1998  
ISSUE DATE





**NOTE:**  
SLOPES MAY VARY TO SUIT CONDITIONS AS PER PLANS OR ENGINEER.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE

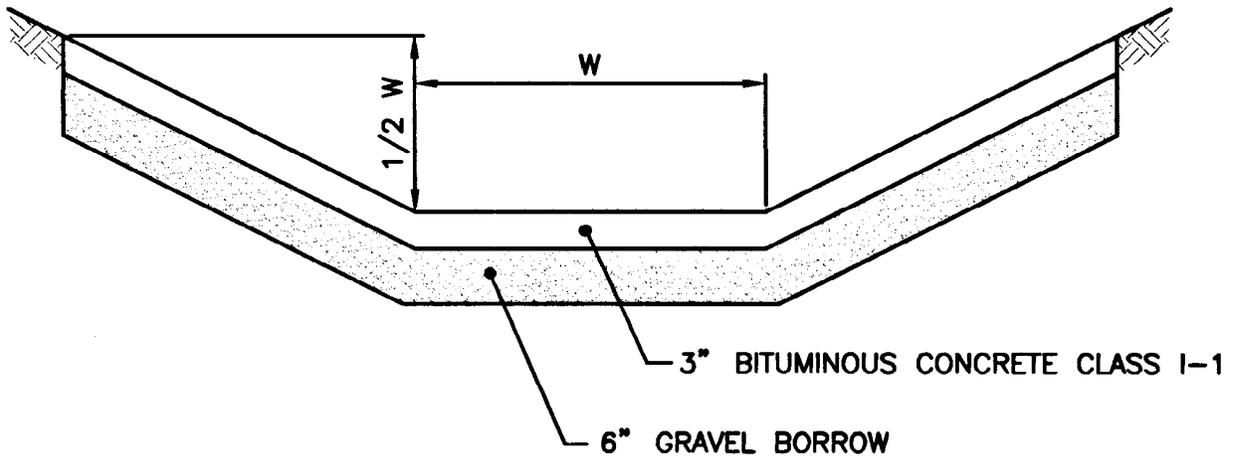
SEEDED DITCH

*James A. Capaldi*  
CHIEF ENGINEER  
TRANSPORTATION

*Edmund J. Parker Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

JUNE 15, 1998  
ISSUE DATE





**NOTE:**  
SLOPES MAY VARY TO SUIT CONDITIONS AS PER PLANS OR ENGINEER.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE

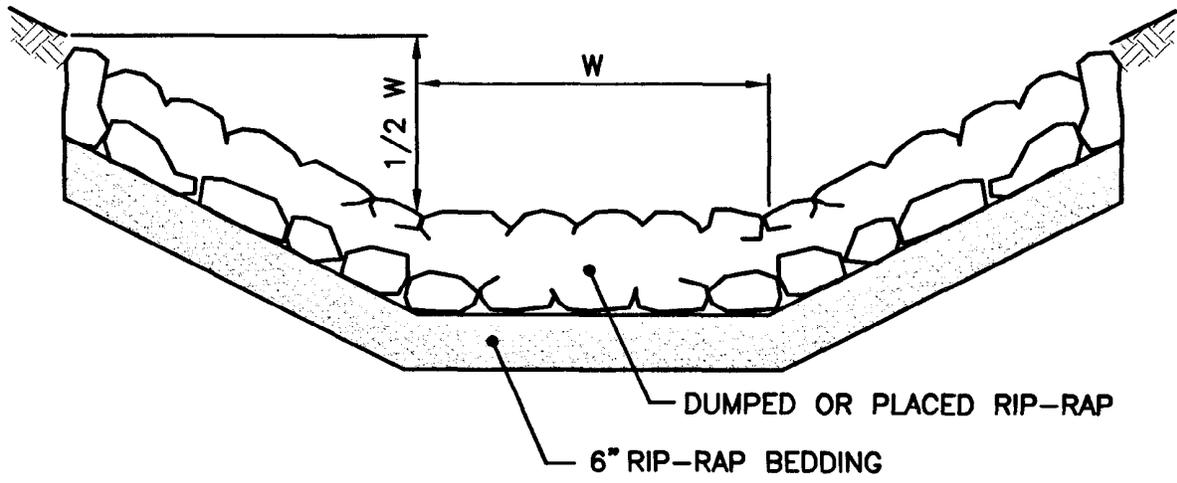
BITUMINOUS CONCRETE DITCH

*James A. Capaldi*  
CHIEF ENGINEER  
TRANSPORTATION

*Edmund Parker Jr*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

JUNE 15, 1998  
ISSUE DATE





**NOTES:**

1. SLOPES MAY VARY TO SUIT CONDITIONS AS PER PLANS OR ENGINEER.
2. RIP-RAP AND BEDDING SIZE MAY VARY. SEE CONTRACT DOCUMENTS.

**RHODE ISLAND DEPARTMENT OF TRANSPORTATION**

**RIP-RAP DITCH**

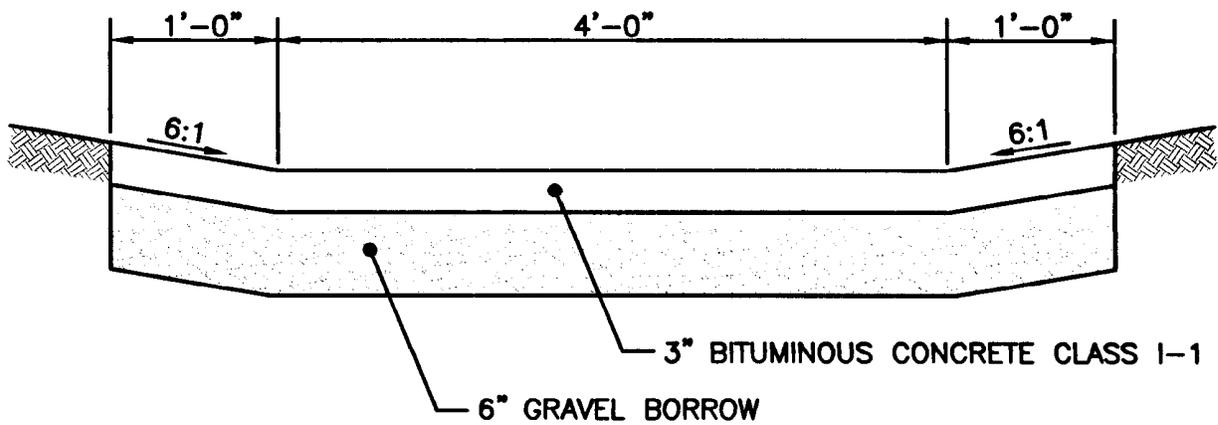
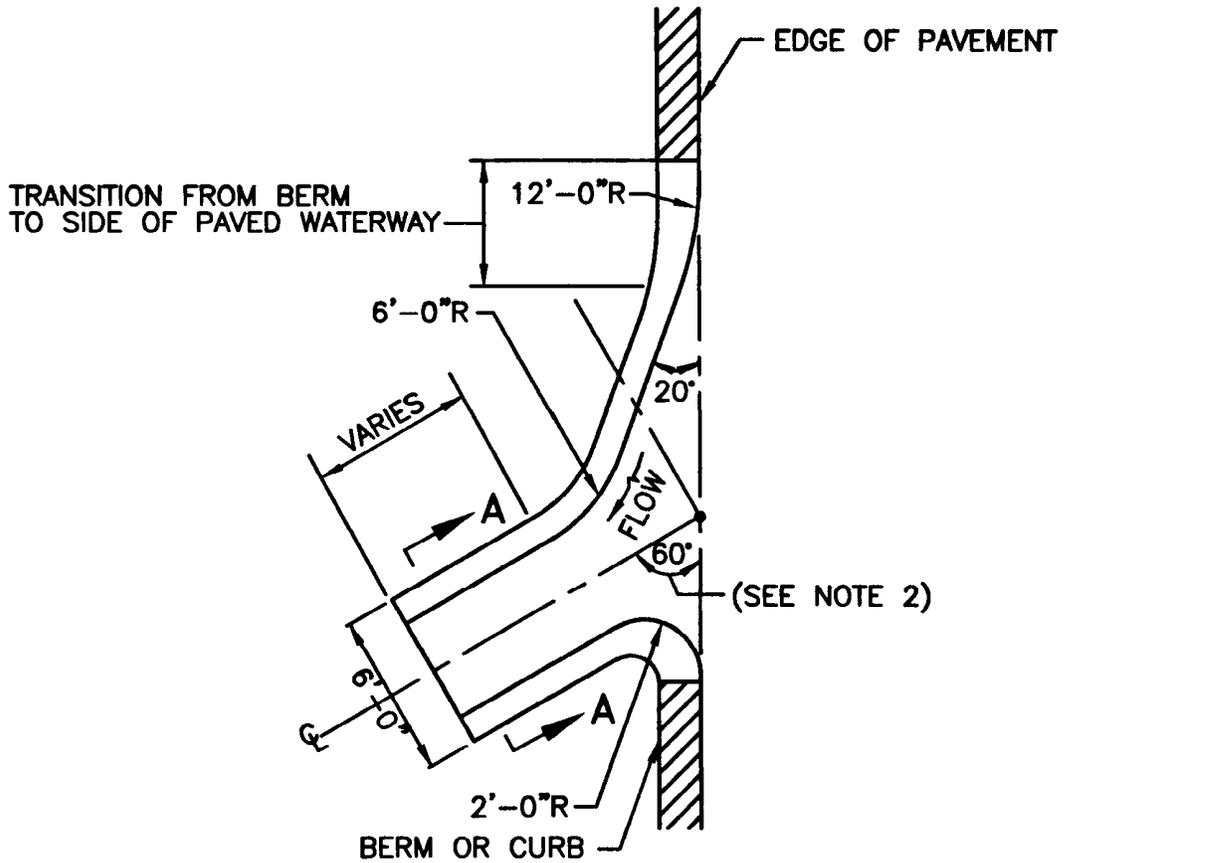
REVISIONS		
NO.	BY	DATE

*James H. Casabdi*  
 CHIEF ENGINEER  
 TRANSPORTATION

*Edmund Parker Jr.*  
 CHIEF DESIGN ENGINEER  
 TRANSPORTATION

JUNE 15, 1998  
 ISSUE DATE





**SECTION A-A**

**NOTES:**

1. SHALL BE IN ACCORDANCE WITH SECTION 711 OF THE R.I. STANDARD SPECIFICATIONS.
2. WHEN PAVED WATERWAY IS USED AT A LOW POINT THIS ANGLE SHALL BE 90°.

**RHODE ISLAND DEPARTMENT OF TRANSPORTATION**

REVISIONS		
NO.	BY	DATE

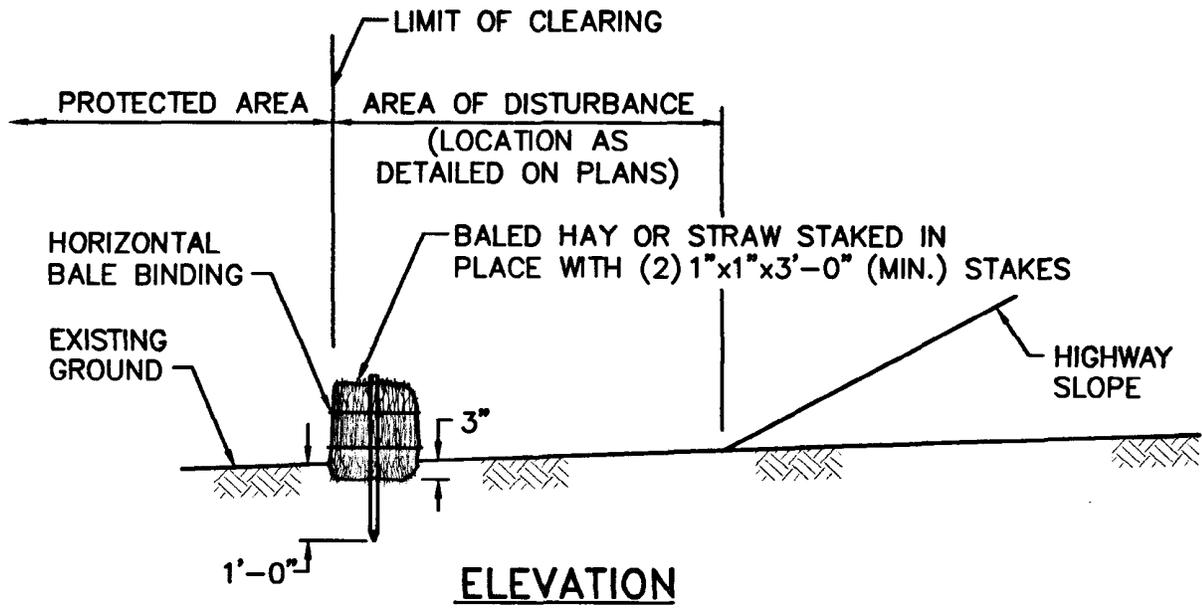
**PAVED WATERWAY**

*James H. Casabelli*  
 CHIEF ENGINEER  
 TRANSPORTATION

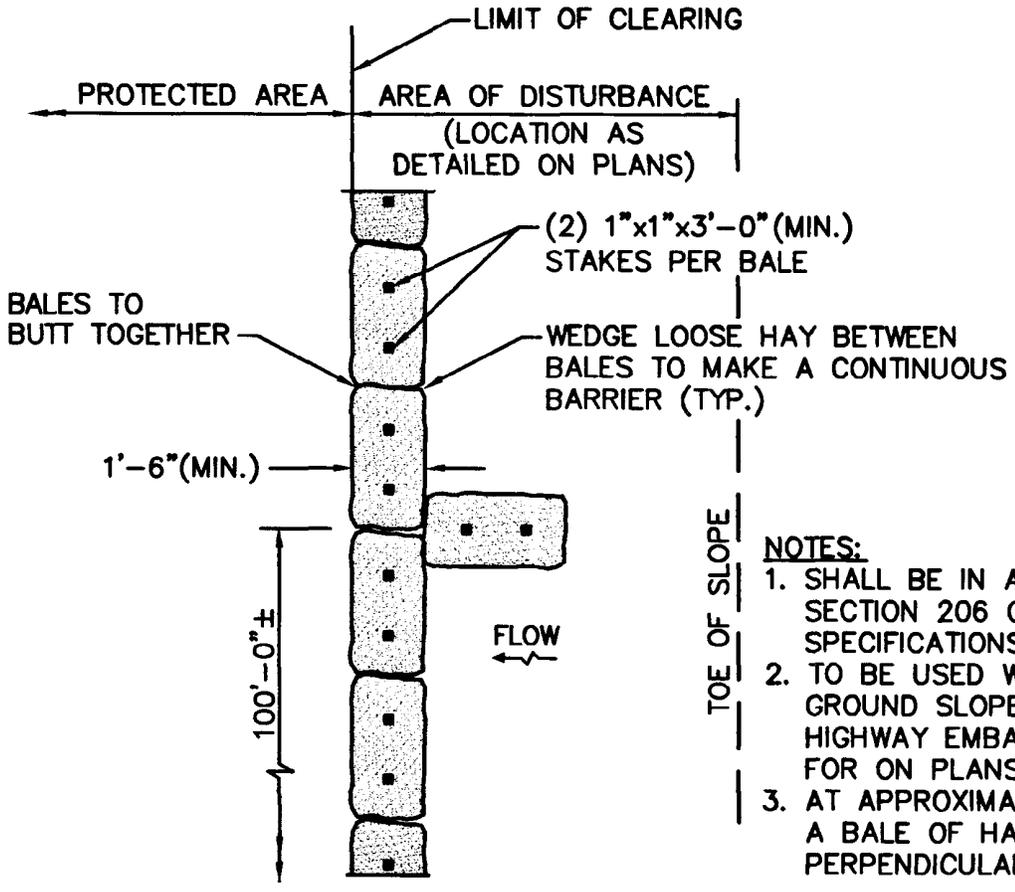
*Edmund J. Parker Jr.*  
 CHIEF DESIGN ENGINEER  
 TRANSPORTATION

**JUNE 15, 1998**  
 ISSUE DATE





**ELEVATION**



**PLAN**

- NOTES:**
1. SHALL BE IN ACCORDANCE WITH SECTION 206 OF THE R.I. STANDARD SPECIFICATIONS.
  2. TO BE USED WHERE THE EXISTING GROUND SLOPES AWAY FROM THE HIGHWAY EMBANKMENT AS CALLED FOR ON PLANS.
  3. AT APPROXIMATE 100'-0" INTERVALS A BALE OF HAY IS TO BUTT PERPENDICULARLY.

**RHODE ISLAND DEPARTMENT OF TRANSPORTATION**

REVISIONS		
NO.	BY	DATE

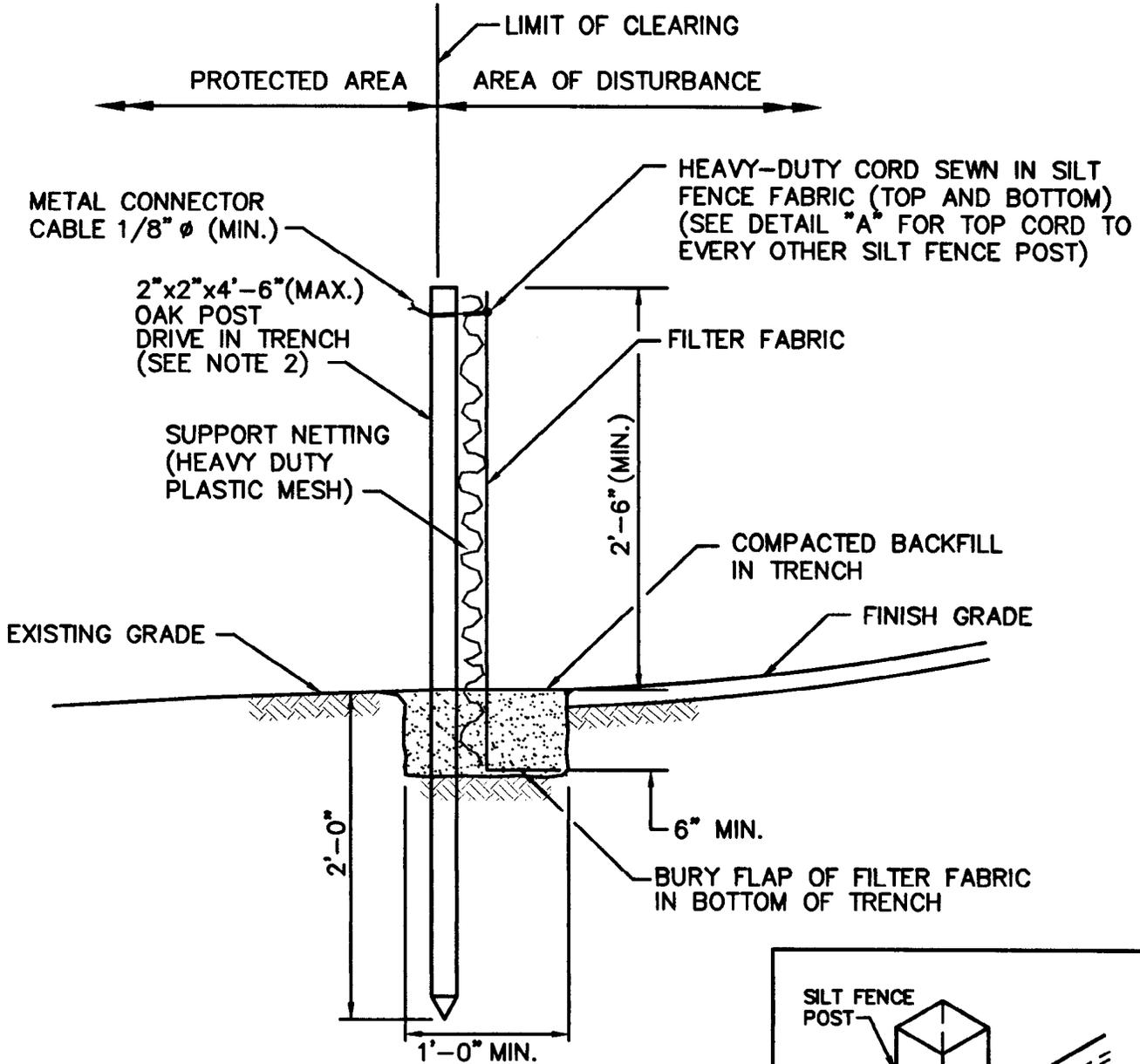
**BALED HAY EROSION CHECK**

*James H. Casabelli*  
 CHIEF ENGINEER  
 TRANSPORTATION

*Edmund Parker Jr.*  
 CHIEF DESIGN ENGINEER  
 TRANSPORTATION

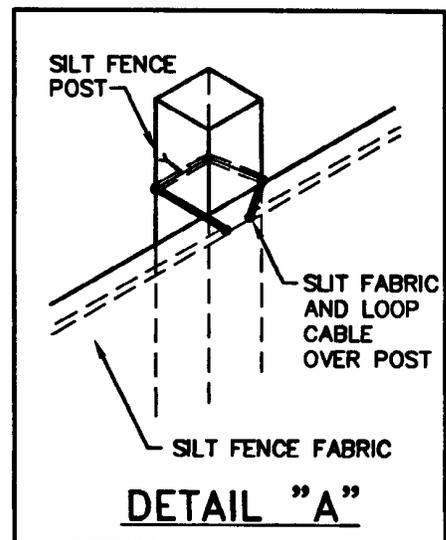
JUNE 15, 1998  
 ISSUE DATE





**NOTES:**

1. SHALL BE IN ACCORDANCE WITH SECTION 206 OF THE R.I. STANDARD SPECIFICATIONS.
2. 2"x2"x4'-6" (MAX.) OAK POSTS FOR SILT FENCE SHALL BE LOCATED 8'-0" (MAX.) O.C. IN WETLAND AREAS AND 4'-0" (MAX.) O.C. IN WETLAND RAVINE, GULLY OR DROP-OFF AREAS AS SHOWN ON PLANS.
3. 1"x1"x4'-6" (MIN.) POSTS PERMITTED FOR PRE-FABRICATED SILT FENCE.
4. SILT FENCE SHALL BE INSTALLED BEFORE ANY GRUBBING OR EARTH EXCAVATION TAKES PLACE.



**RHODE ISLAND DEPARTMENT OF TRANSPORTATION**

**SILT FENCE DETAIL**

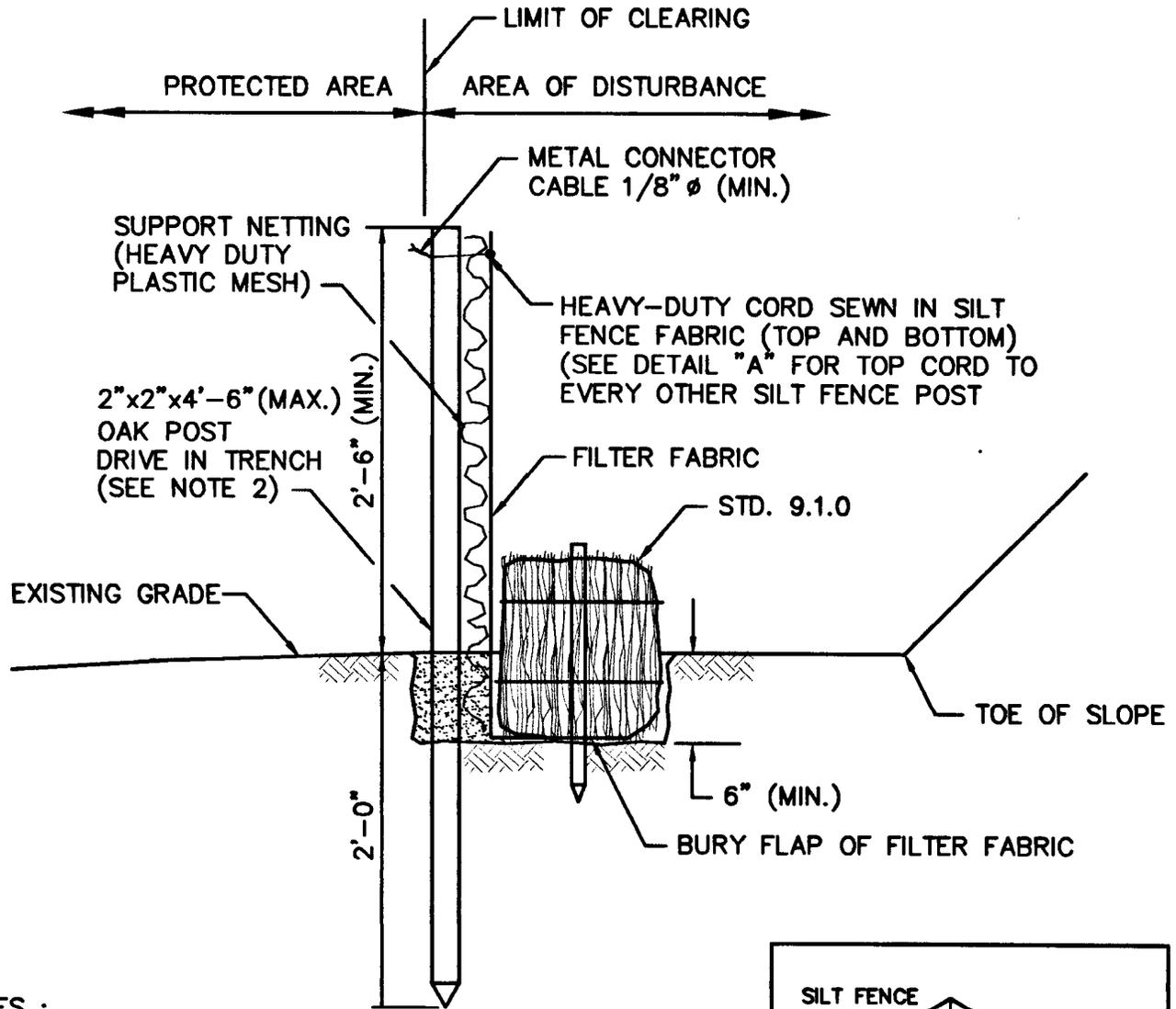
REVISIONS		
NO.	BY	DATE

*James A. Capaldi*  
 CHIEF ENGINEER  
 TRANSPORTATION

*Edmund J. Parker*  
 CHIEF DESIGN ENGINEER  
 TRANSPORTATION

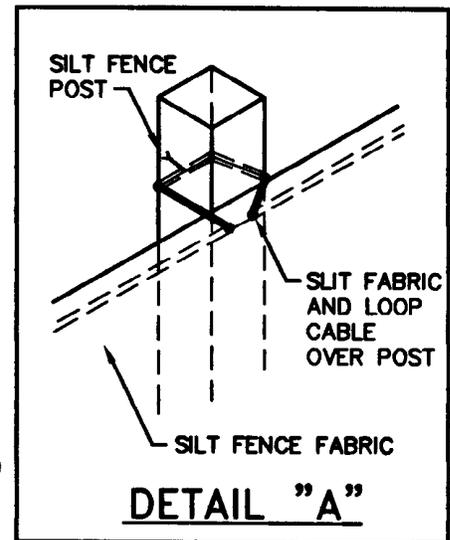
JUNE 15, 1998  
 ISSUE DATE





**NOTES :**

1. SHALL BE IN ACCORDANCE WITH SECTION 206 OF THE R.I. STANDARD SPECIFICATIONS.
2. STD. 9.1.0 IS INSTALLED "TIGHT" AGAINST SILT FENCE. THOROUGHLY COMPACT EXCAVATED SOILS BACK INTO TRENCH AFTER INSTALLATION OF EROSION CONTROL DEVICE. SILT FENCE FABRIC SHALL NOT BE SLIT. STD. 9.1.0 POST SHALL BE DRIVEN THROUGH SILT FENCE FABRIC. 2"x2"x4'-6" (MAX.) OAK POST FOR SILT FENCE SHALL BE LOCATED 8'-0" (MAX.) O.C. IN WETLAND AREAS AND 4'-0" (MAX.) O.C. IN WETLAND RAVINE, GULLY OR DROP-OFF AREAS AS SHOWN ON PLANS.
3. 1"x1"x4'-6" (MIN.) POSTS PERMITTED FOR PRE-FABRICATED SILT FENCE.
4. SILT FENCE AND BALED HAY SHALL BE INSTALLED BEFORE ANY GRUBBING OR EARTH EXCAVATION TAKES PLACE.



**RHODE ISLAND DEPARTMENT OF TRANSPORTATION**

**BALED HAY EROSION CHECK AND SILT FENCE COMBINED**

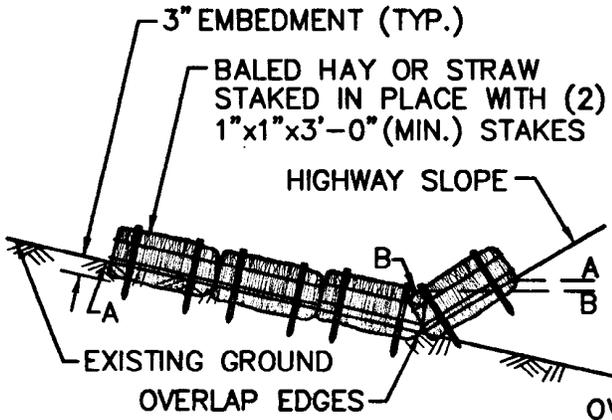
REVISIONS		
NO.	BY	DATE

*James H. Casaldi*  
CHIEF ENGINEER  
TRANSPORTATION

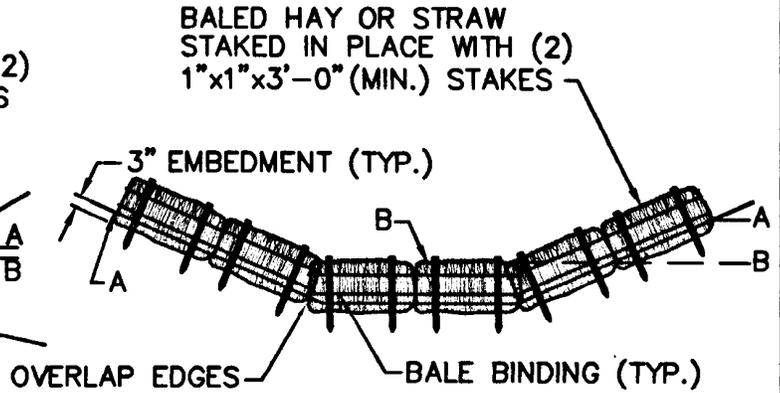
*Edmund Parker Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

JUNE 15, 1998  
ISSUE DATE

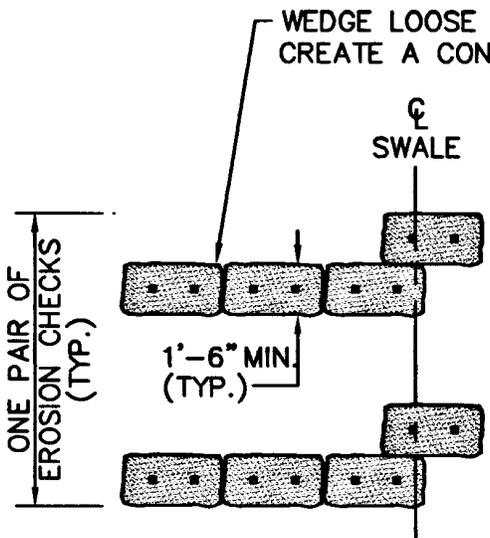




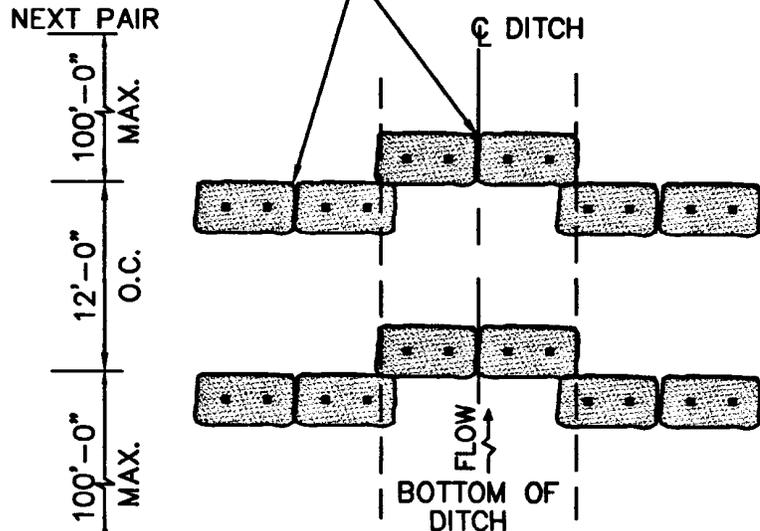
**SWALE ELEVATION**



**DITCH ELEVATION**



**SWALE PLAN**



**DITCH PLAN**

**NOTES:**

1. SHALL BE IN ACCORDANCE WITH SECTION 207 OF THE R.I. STANDARD SPECIFICATIONS.
2. TO BE USED IN LOCATIONS WHERE THE EXISTING GROUND SLOPES IN TOWARD THE EMBANKMENT OR IN DRAINAGE DITCHES AS CALLED FOR ON THE PLANS.
3. THE BALES ARE TO BE EMBEDDED A MINIMUM OF 3" INTO THE EXISTING GROUND, HIGHWAY SLOPE OR DITCH SECTION.
4. POINTS "A" SHOULD BE AT A HIGHER ELEVATION THAN POINTS "B".

**RHODE ISLAND DEPARTMENT OF TRANSPORTATION**

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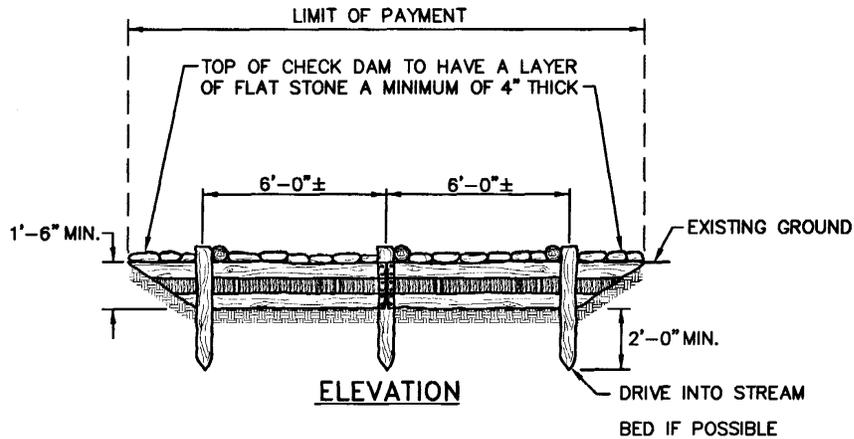
**BALED HAY DITCH AND SWALE EROSION CHECK**

*James A. Capaldi*  
CHIEF ENGINEER  
TRANSPORTATION

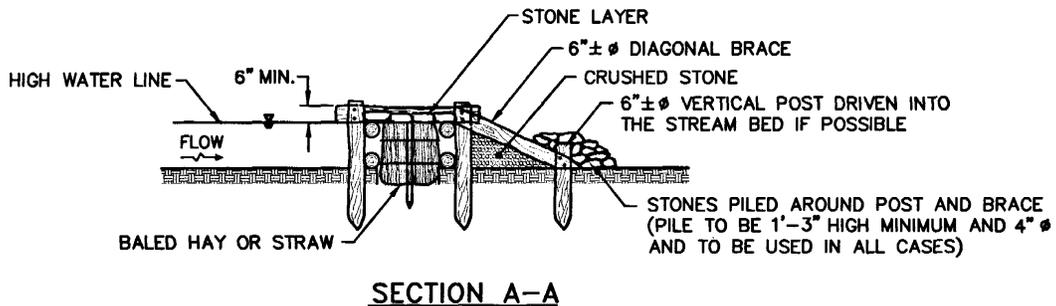
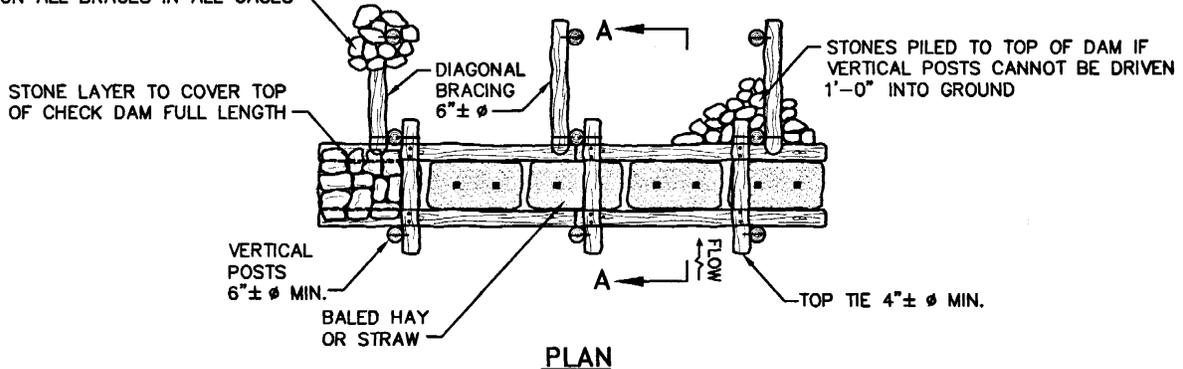
*Edmund J. Parker Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

JUNE 15, 1998  
ISSUE DATE





PILED STONE TO STABILIZE BRACING ON ALL BRACES IN ALL CASES



**NOTES:**

1. SHALL BE IN ACCORDANCE WITH SECTION 207 OF THE R.I. STANDARD SPECIFICATIONS.
2. DAM TO BE CONSTRUCTED OF NATIVE LOGS OBTAINED FROM CLEARING OPERATION, WHEN AVAILABLE. ALL LOGS TO BE SPIKED WITH WIRE SPIKES OR BOLTED TOGETHER. EXISTING TREES, BOULDERS OR LEDGE MAY BE USED IN PLACE OF THE THE VERTICAL POSTS AT THE DISCRETION OF THE ENGINEER.
3. WHEN VERTICAL POST CANNOT BE DRIVEN INTO THE STREAM BED, STONES SHALL BE USED TO BRACE THE STRUCTURE.
4. BALES OF HAY TO BE EMBEDDED A MINIMUM OF 6" INTO THE EXISTING GROUND. IF THE EXISTING GROUND IS LEDGE, A 2'-0"x2'-0" WEDGE OF CRUSHED STONE IS TO BE PLACED AGAINST THE UPSTREAM FACE OF THE CHECK DAM.
5. HEIGHT OF THE DAM WILL VARY BASED ON HIGH WATER LEVEL.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

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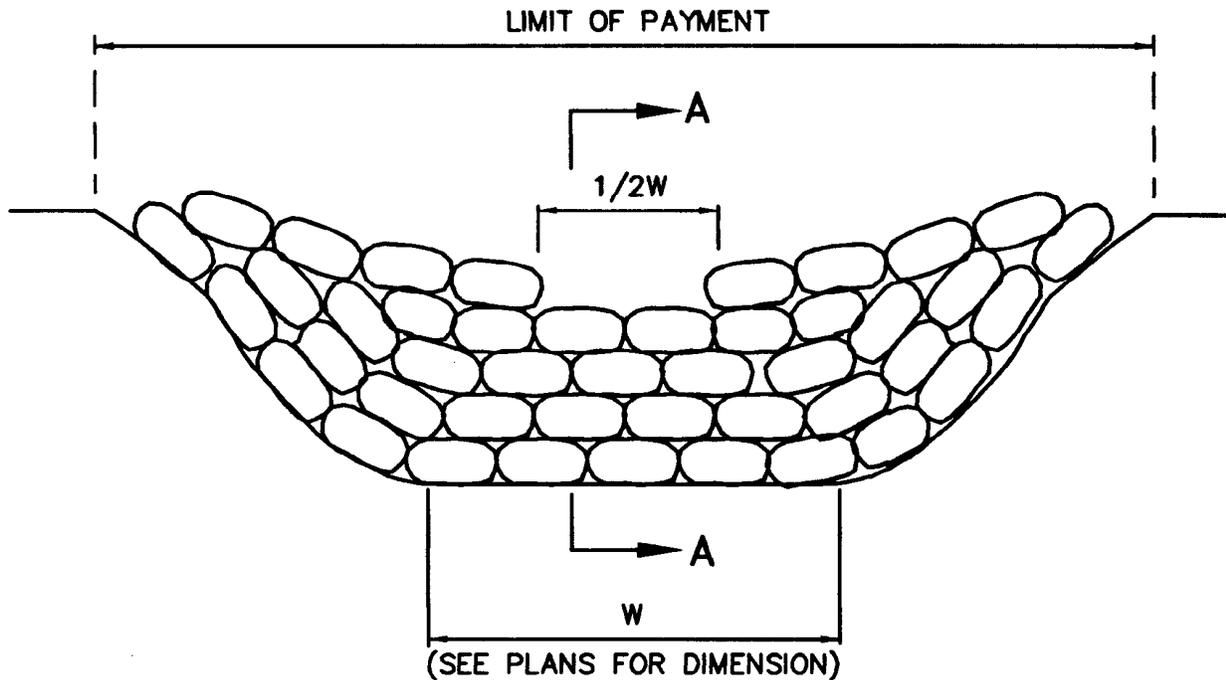
LOG AND HAY CHECK DAM

*James H. Capelli*  
CHIEF ENGINEER  
TRANSPORTATION

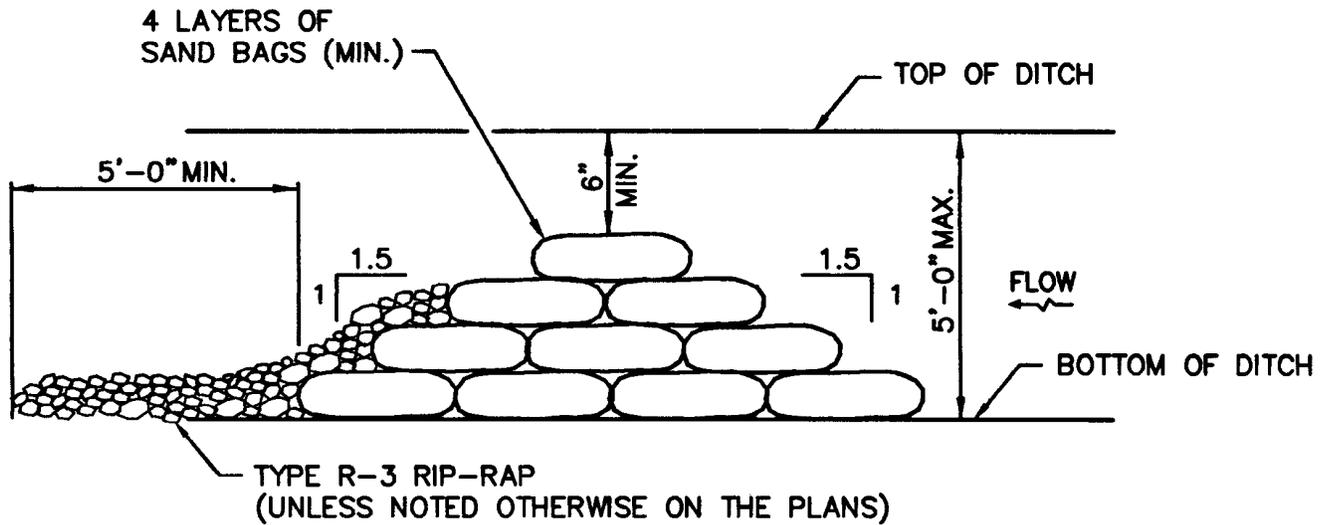
*Edmund J. Perkins Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

JUNE 15, 1998  
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**ELEVATION**



**SECTION A-A**

**NOTE:**  
SHALL BE IN ACCORDANCE WITH SECTION 207 OF THE R.I. STANDARD SPECIFICATIONS.

**RHODE ISLAND DEPARTMENT OF TRANSPORTATION**

REVISIONS		
NO.	BY	DATE

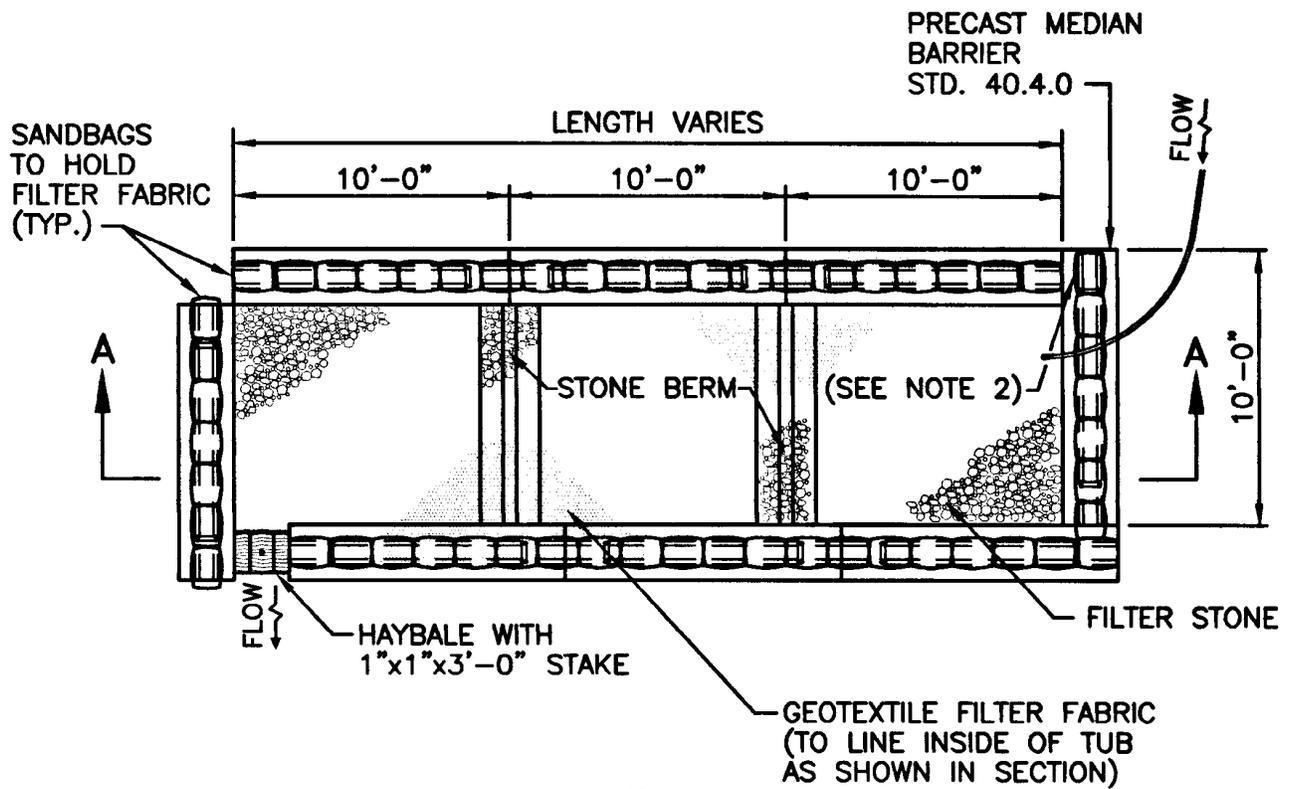
**SAND BAG EROSION CHECK**

*James H. Capaldi*  
CHIEF ENGINEER  
TRANSPORTATION

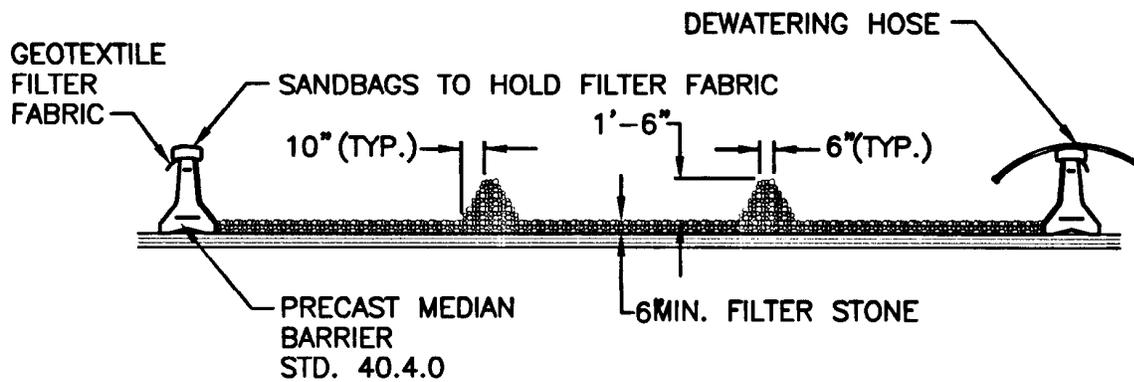
*Edmund J. Parker Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

**JUNE 15, 1998**  
ISSUE DATE





**PLAN**



**SECTION**

**NOTS:**

1. SHALL BE IN ACCORDANCE WITH SECTION 208 OF THE R.I. STANDARD SPECIFICATIONS.
2. PROVIDE ADDITIONAL SAND BAGS AS REQUIRED TO FILL SPACE BETWEEN ADJACENT BARRIERS.

**RHODE ISLAND DEPARTMENT OF TRANSPORTATION**

**DEWATERING BASIN**

REVISIONS		
NO.	BY	DATE

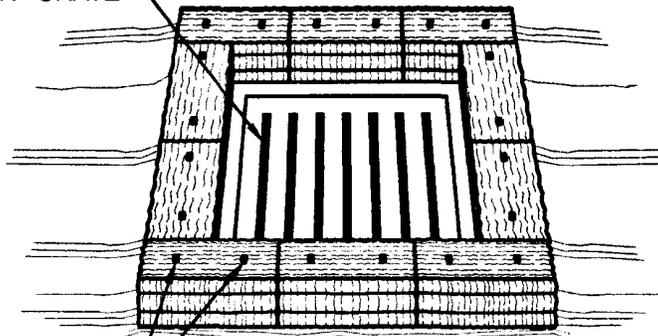
*John A. Capaldi*  
CHIEF ENGINEER  
TRANSPORTATION

*Edward J. Parker Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

JUNE 15, 1998  
ISSUE DATE



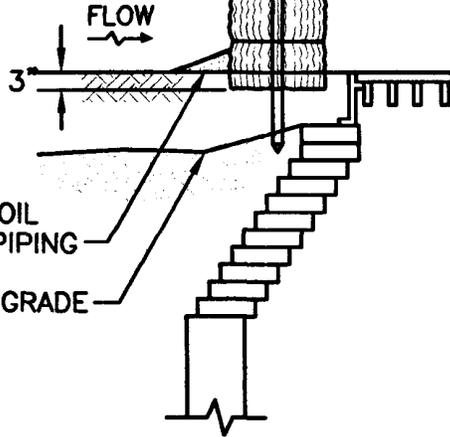
CATCH BASIN WITH GRATE



(2) 1"x1"x3'-0" STAKES PER BALE

HORIZONTAL BALE BINDING (TYP.)

BALED HAY OR STRAW STAKED IN PLACE



COMPACTED SOIL TO PREVENT PIPING

SUBGRADE

**NOTES:**

1. SHALL BE IN ACCORDANCE WITH SECTION 209 OF THE R.I. STANDARD SPECIFICATIONS.
2. THIS INLET PROTECTION CAN ALSO BE USED WHEN CONSTRUCTION SEQUENCING REQUIRES A CATCH BASIN TO BE EXPOSED TO SEDIMENT FROM THE SUBGRADE. THIS WILL BE ACHIEVED BY INSTALLING THE BALED HAY AS SHOWN ON THIS DETAIL INTO THE SUBGRADE.
3. THE PERIMETER CONFIGURATION OF THE BALED HAY WILL VARY DEPENDING ON THE PARTICULAR TYPE OF CATCH BASIN INLET BEING CONSTRUCTED. THE ENGINEER WILL PROVIDE SPECIFIC DIRECTION IN SUCH CASES.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE

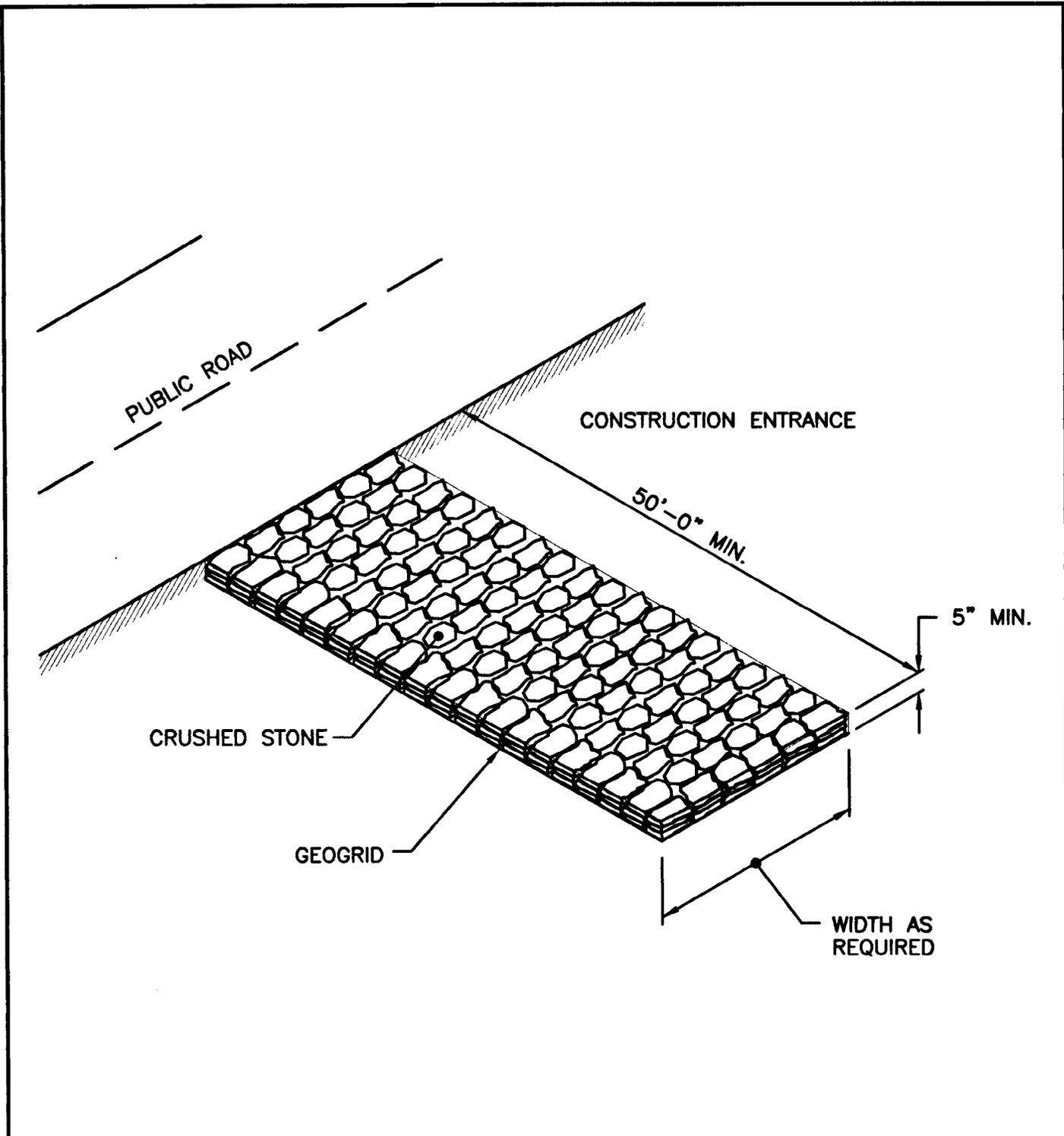
**BALED HAY CATCH BASIN INLET PROTECTION**

*James N. Casaldi*  
CHIEF ENGINEER  
TRANSPORTATION

*Edmund Parker Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

JUNE 15, 1998  
ISSUE DATE





**NOTE:**  
SHALL BE IN ACCORDANCE WITH SECTION 211 OF THE R.I. STANDARD SPECIFICATIONS.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE

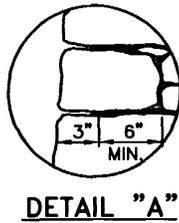
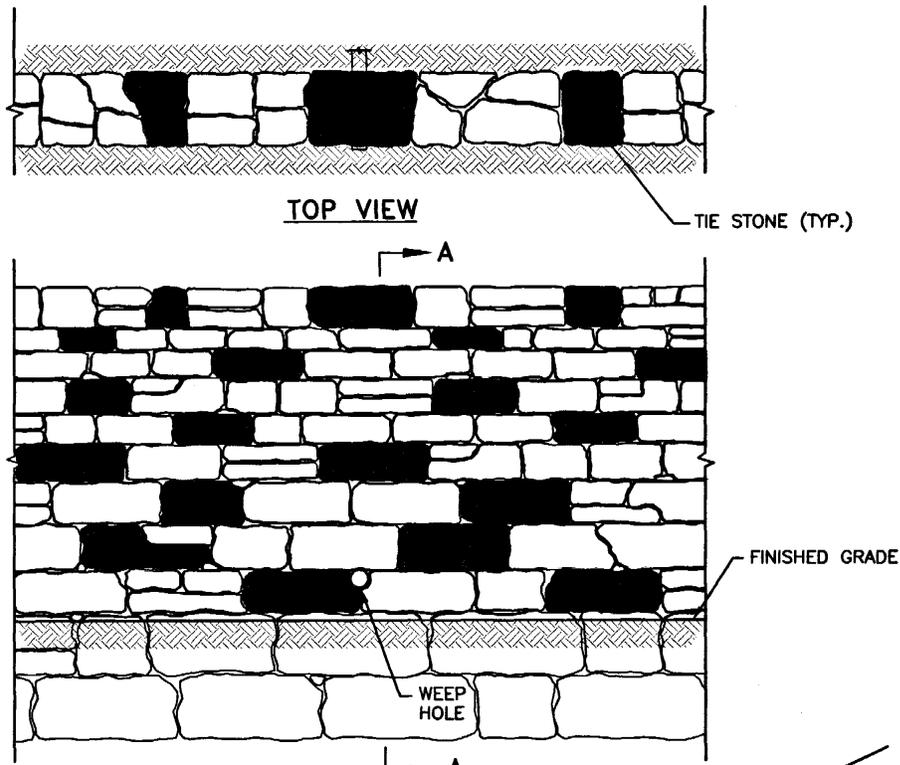
CONSTRUCTION ACCESS

*James A. Capaldi*  
CHIEF ENGINEER  
TRANSPORTATION

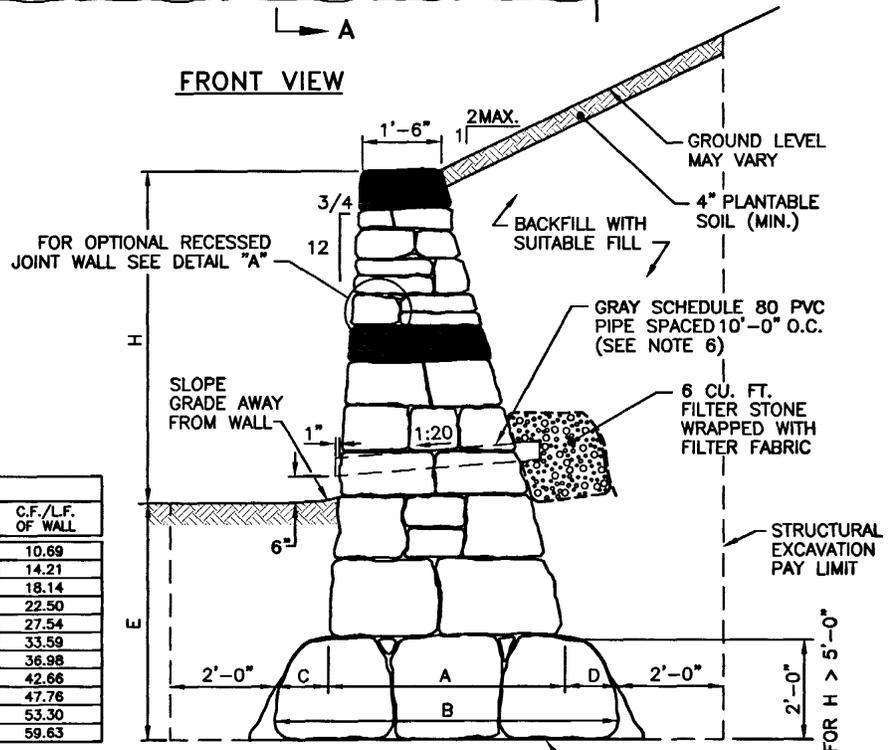
*Edmund J. Parker Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

JUNE 15, 1998  
ISSUE DATE





DIMENSIONS AND QUANTITIES						
H	A	B	C	D	E	C.F./L.F. OF WALL
2'-0"	3'-3"	-	-	-	2'-6"	10.69
3'-0"	3'-6"	-	-	-	2'-6"	14.21
4'-0"	4'-1"	-	-	-	2'-6"	18.14
5'-0"	4'-6"	-	-	-	2'-6"	22.50
6'-0"	-	5'-4"	1'-0"	1'-4"	3'-6"	27.54
7'-0"	-	6'-2"	1'-4"	1'-4"	3'-6"	33.59
8'-0"	-	6'-5"	1'-4"	1'-6"	3'-6"	36.98
9'-0"	-	7'-4"	1'-9"	1'-9"	3'-6"	42.66
10'-0"	-	7'-10"	1'-9"	2'-0"	3'-6"	47.76
11'-0"	-	8'-5"	1'-10"	2'-3"	3'-6"	53.30
12'-0"	-	9'-0"	1'-10"	2'-6"	3'-6"	59.63



- NOTES:**
- CONSTRUCTION SHALL BE IN ACCORDANCE WITH SECTION 911 OF THE R.I. STANDARD SPECIFICATIONS.
  - JOINTS SHALL NOT EXCEED 1" IN WIDTH.
  - JOINTS ON THE FACE OF WALL SHALL BE POINTED TO THE FACE LINE OF THE WALL UNLESS RECESSED JOINTS ARE CALLED FOR ABOVE GRADE.
  - POINTING OF JOINTS ON TOP OF WALL SHALL BE FLUSH AND PITCHED TO DEFLECT WATER OFF OF THE WALL.
  - DRESS 6" BELOW GRADE FOR FRONT FACE OF WALL.
  - WEEP HOLES SHALL BE CONSTRUCTED OF 3" GRAY SCHEDULE 80 PVC PIPE WHEN  $H \leq 5'-0"$  AND 4" GRAY SCHEDULE 80 PIPE WHEN  $H > 5'-0"$ . ALL PIPE IS TO BE SOLID.
  - TIE STONES SHALL BE PLACED A MAXIMUM OF 4'-0" O.C.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

WET STONE MASONRY RETAINING WALL

REVISIONS		
NO.	BY	DATE

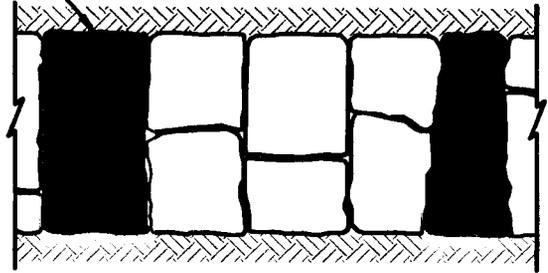
*James R. Capaldi*  
CHIEF ENGINEER  
TRANSPORTATION

*Edmund Parker Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

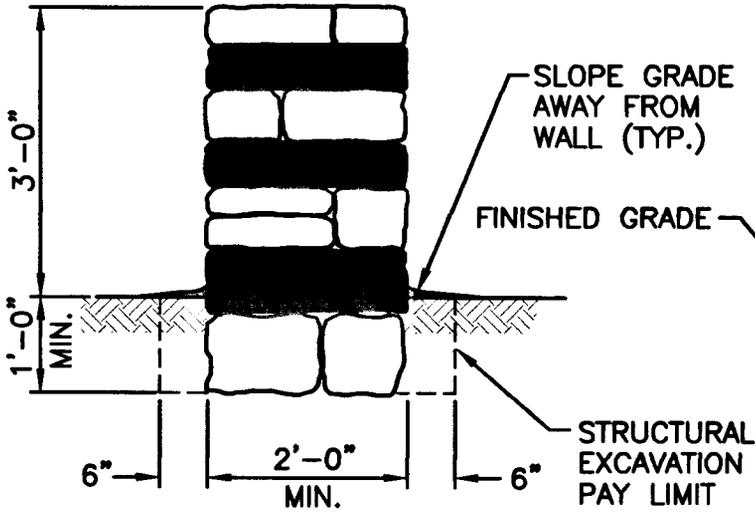
JUNE 15, 1998  
ISSUE DATE



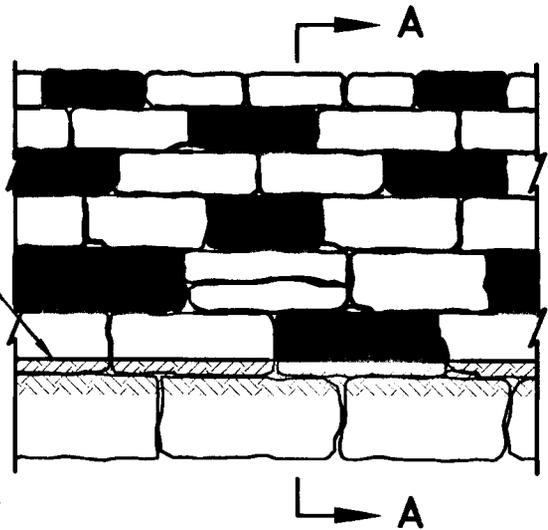
TIE STONE (TYP.)



PLAN



SECTION A-A



ELEVATION

**NOTES:**

1. SHALL BE IN ACCORDANCE WITH SECTION 912 OF THE R.I. STANDARD SPECIFICATIONS.
2. TIE STONES SHALL BE PLACED A MAXIMUM OF 4'-0" O.C.

**RHODE ISLAND DEPARTMENT OF TRANSPORTATION**

**RUBBLE MASONRY WALL**

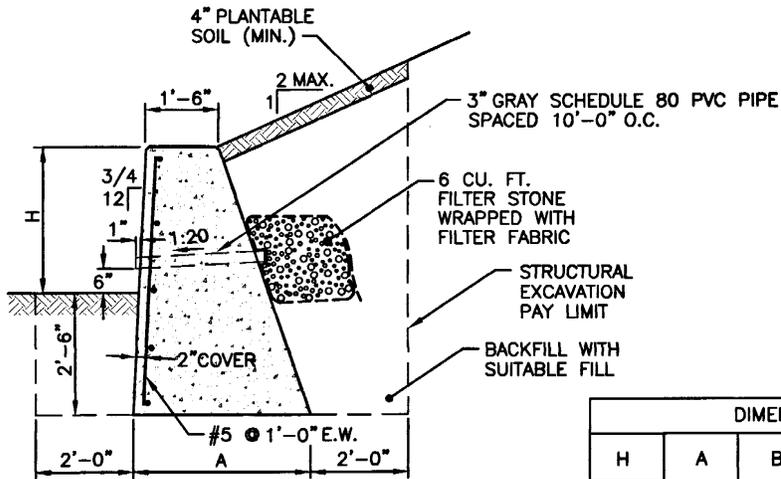
REVISIONS		
NO.	BY	DATE

*James H. Czaulki*  
 CHIEF ENGINEER  
 TRANSPORTATION

*Edmund J. Parker Jr.*  
 CHIEF DESIGN ENGINEER  
 TRANSPORTATION

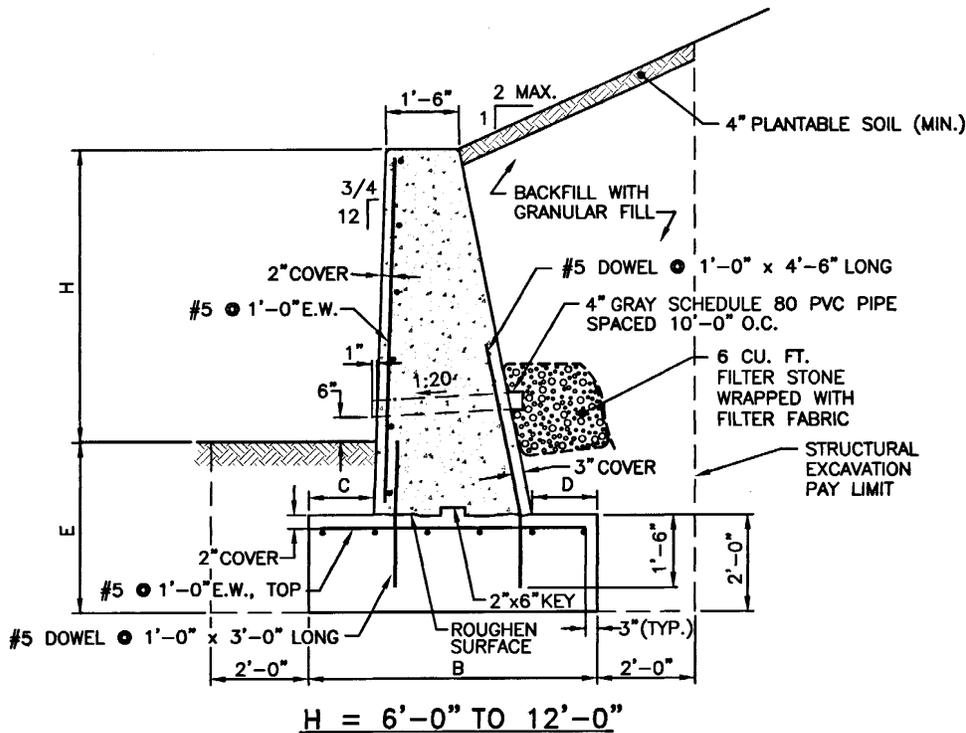
JUNE 15, 1998  
 ISSUE DATE





H = 2'-0" TO 5'-0"

DIMENSIONS AND QUANTITIES						
H	A	B	C	D	E	C.F./L.F. OF WALL
2'-0"	3'-3"	-	-	-	2'-6"	10.69
3'-0"	3'-8"	-	-	-	2'-6"	14.21
4'-0"	4'-1"	-	-	-	2'-6"	18.14
5'-0"	4'-6"	-	-	-	2'-6"	22.50
6'-0"	-	5'-4"	1'-0"	1'-4"	3'-6"	27.54
7'-0"	-	6'-2"	1'-4"	1'-4"	3'-6"	33.59
8'-0"	-	6'-5"	1'-4"	1'-6"	3'-6"	36.98
9'-0"	-	7'-4"	1'-9"	1'-9"	3'-6"	42.66
10'-0"	-	7'-10"	1'-9"	2'-0"	3'-6"	47.76
11'-0"	-	8'-5"	1'-10"	2'-3"	3'-6"	53.30
12'-0"	-	9'-0"	1'-10"	2'-6"	3'-6"	59.63



H = 6'-0" TO 12'-0"

**NOTES:**

1. SHALL BE IN ACCORDANCE WITH SECTION 808 OF THE R.I. STANDARD SPECIFICATIONS.
2. USE 1/2" PREFORMED JOINT FILLER AND BEVEL EXPOSED EDGES WITH 3/4" CHAMFER.
3. SEAL BACKFACE WITH 1/4"x1/2" JOINT SEALANT.
4. SURFACE RUB EXPOSED FACE AND TOP.
5. ALL REINFORCING TO BE EPOXY COATED.
6. PROVIDE EXPANSION JOINTS EVERY 25'-0" IN STEMS.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

CONCRETE RETAINING WALL

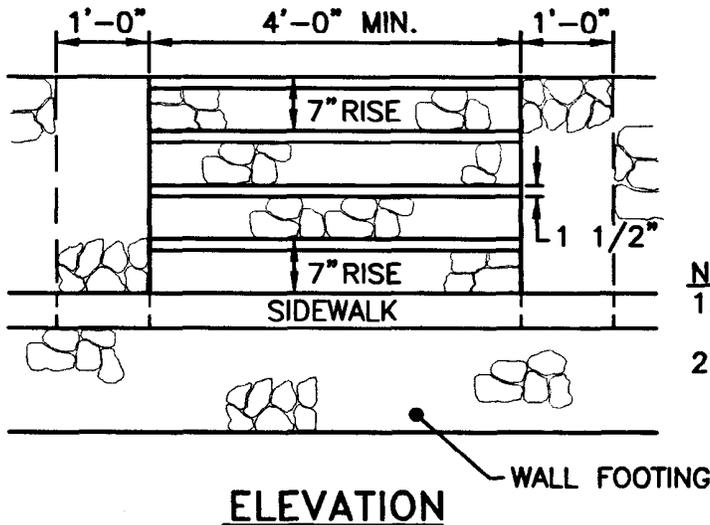
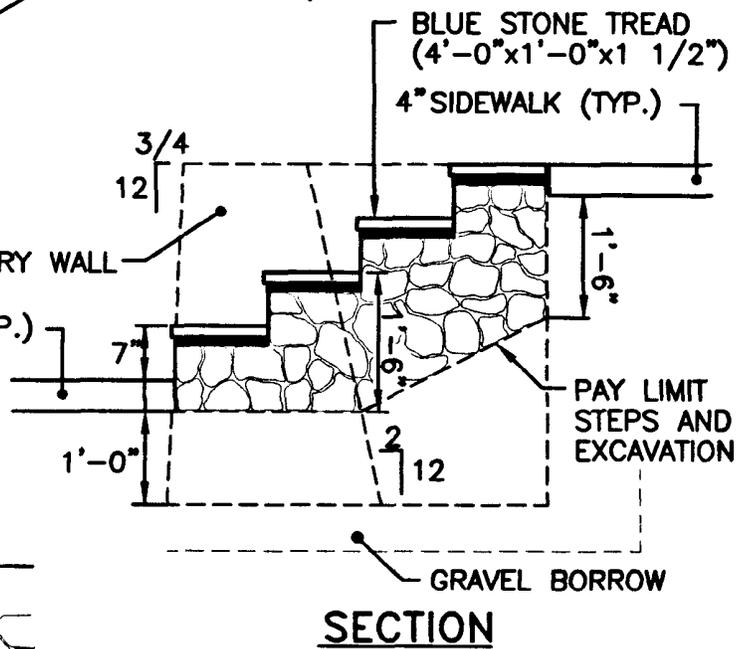
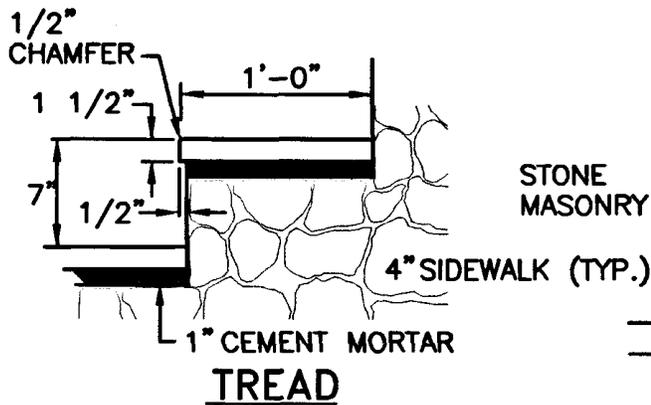
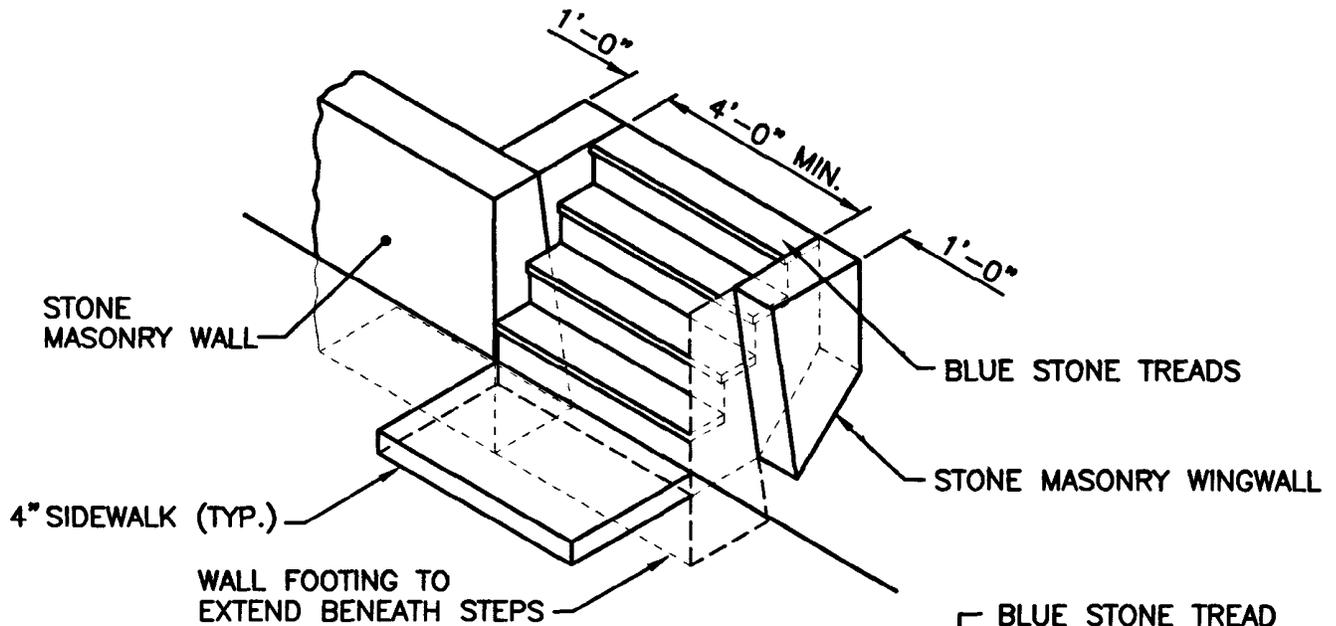
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*James A. Capaldi*  
CHIEF ENGINEER  
TRANSPORTATION

*Edward J. Parker*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

JUNE 15, 1998  
ISSUE DATE





**NOTES:**

1. SHALL BE IN ACCORDANCE WITH SECTION 911 OF THE R.I. STANDARD SPECIFICATIONS.
2. ALL EXPOSED TOP EDGES OF TREADS TO HAVE 1/2" CHAMFER (SAW OR TOOLED).

**RHODE ISLAND DEPARTMENT OF TRANSPORTATION**

**STONE MASONRY STEPS**

REVISIONS		
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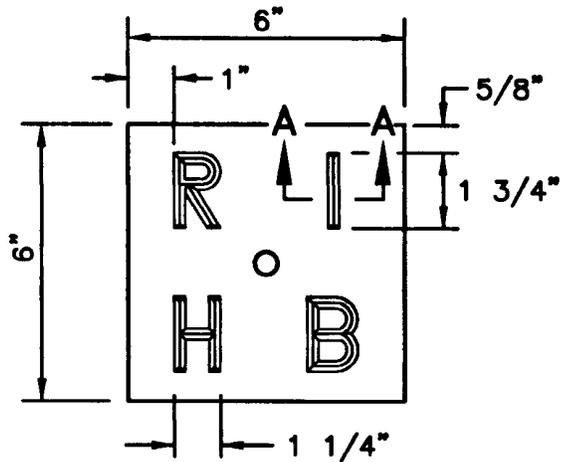
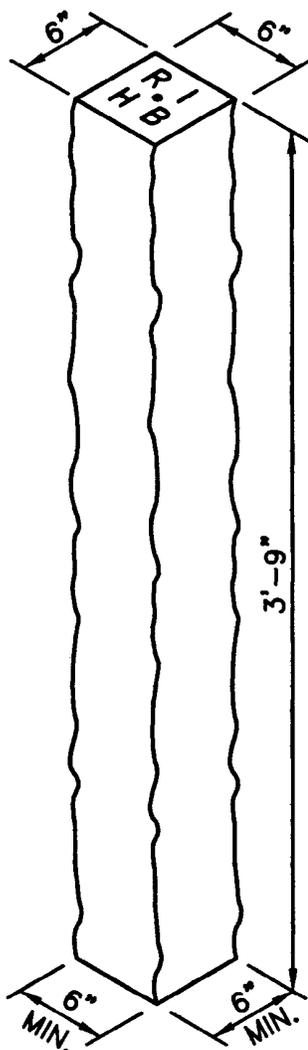
*James H. Casaldi*  
 CHIEF ENGINEER  
 TRANSPORTATION

*Edmund Parker Jr.*  
 CHIEF DESIGN ENGINEER  
 TRANSPORTATION

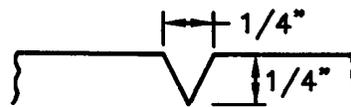
JUNE 15, 1998  
 ISSUE DATE







PLAN



SECTION A-A

**NOTES:**

1. SHALL BE IN ACCORDANCE WITH SECTION 915 OF THE R.I. STANDARD SPECIFICATIONS.
2. BOUND TO BE QUARRY SPLIT FROM FINE GRAIN GRANITE FREE FROM NATURAL FRACTURES, SEAMS, LAMINATIONS, CRACKS OR IMPURITIES.
3. TOP SURFACE OF BOUND TO BE DRESSED OR SAWED.
4. CONICAL DRILL HOLE IN CENTER OF TOP TO BE 1/4"  $\phi$  AND 3/4" DEEP.
5. BOTTOM TO BE AT LEAST 6" SQUARE AND FLAT.
6. LETTERS "RIHB" ON TOP TO BE OF DIMENSIONS AS SHOWN.
7. BOUNDS TO BE SET 6" ABOVE FINISHED GRADE, EXCEPT IN SIDEWALKS, LAWNS AND DRIVEWAYS WHERE THEY SHALL BE SET FLUSH WITH FINISHED GRADE.

**RHODE ISLAND DEPARTMENT OF TRANSPORTATION**

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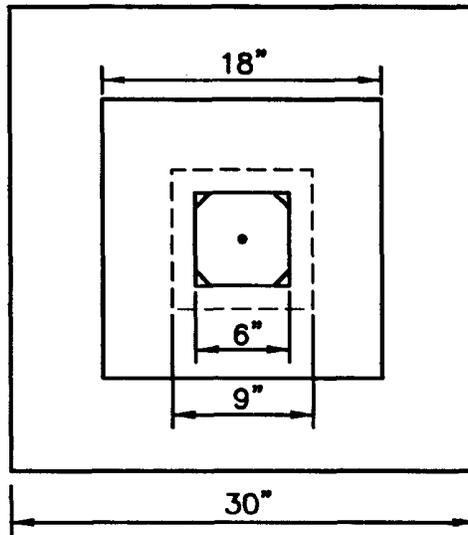
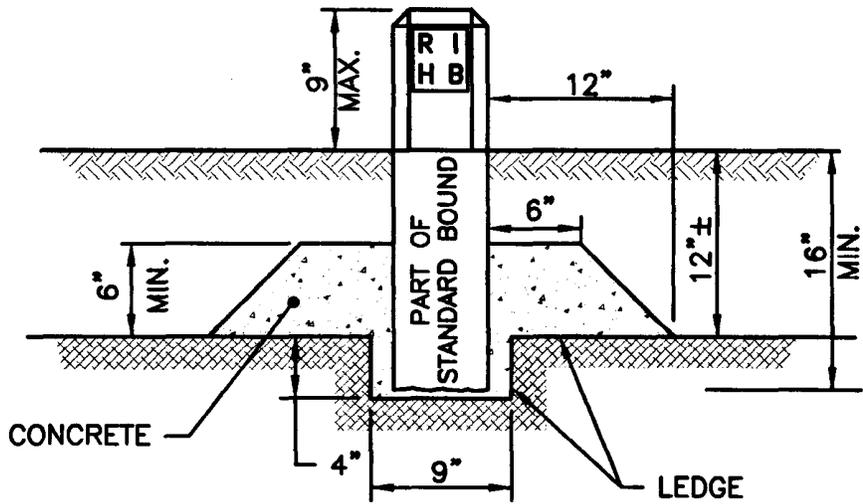
**GRANITE HIGHWAY BOUND**

*James R. Capaldi*  
CHIEF ENGINEER  
TRANSPORTATION

*Edmund Parker Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

JUNE 15, 1998  
ISSUE DATE





**NOTES:**

1. SHALL BE IN ACCORDANCE WITH SECTION 915 OF THE R.I. STANDARD SPECIFICATIONS.
2. SEE STD. 14.1.0 OR STD. 14.2.0 FOR DETAILS OF BOUND.
3. 9" SQUARE HOLE, 4" DEEP TO BE CHIPPED IN LEDGE.
4. BOUNDS TO BE SET 6" ABOVE FINISHED GRADE, EXCEPT IN SIDEWALKS, LAWNS AND DRIVEWAYS WHERE THEY SHALL BE SET FLUSH WITH FINISHED GRADE.

**RHODE ISLAND DEPARTMENT OF TRANSPORTATION**

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**HIGHWAY BOUND  
SET IN CONCEALED LEDGE**

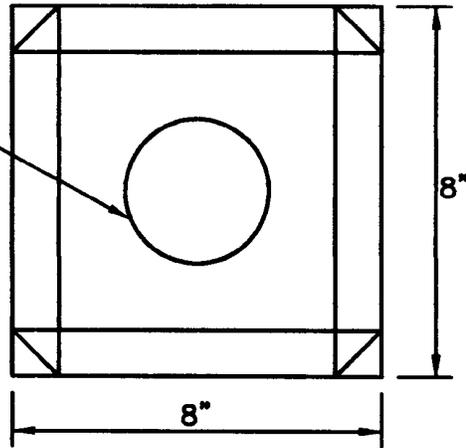
*James A. Capaldi*  
CHIEF ENGINEER  
TRANSPORTATION

*Edmund J. Parker Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

**JUNE 15, 1998**  
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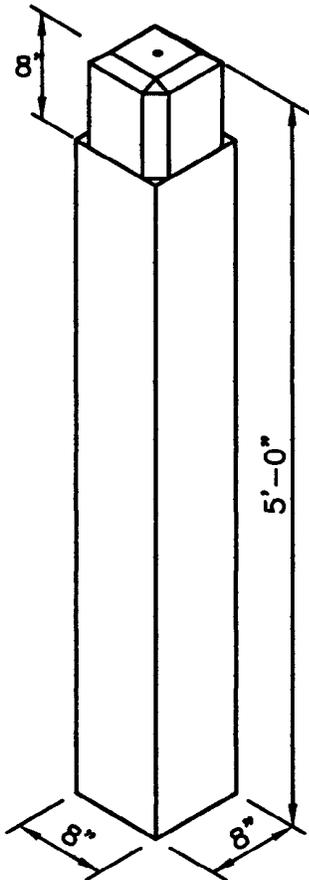


STANDARD BENCH MARK  
OR TRIANGULATION STATION

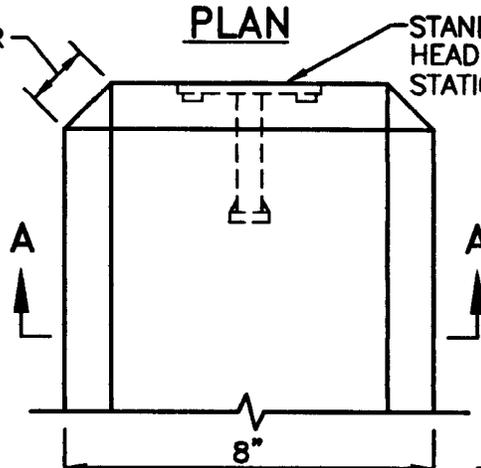


PLAN

STANDARD BENCH MARK  
HEAD OR TRIANGULATION  
STATION



1" CHAMFER



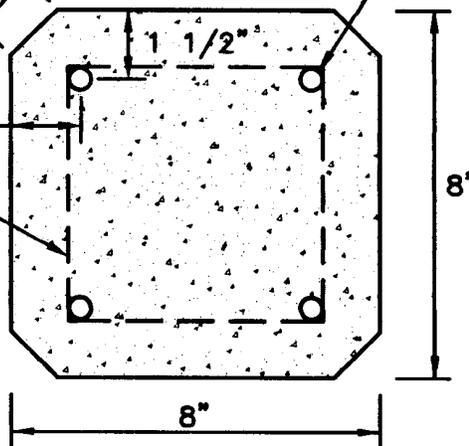
ELEVATION

#3 DEFORMED  
EPOXY COATED  
REINFORCEMENT  
4'-9" LONG, SET  
TO CLEAR TOP AND  
BOTTOM OF BOUND  
BY 1 1/2"

1" CHAMFER

1 1/2"

#8 WIRE



SECTION A-A

NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION 915 OF THE R.I. STANDARD SPECIFICATIONS.
2. MONUMENTS TO BE SET 6" ABOVE FINISHED GRADE, EXCEPT IN SIDEWALKS, LAWNS AND DRIVEWAYS WHERE THEY SHALL BE SET FLUSH WITH FINISHED GRADE.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REINFORCED CONCRETE  
PRECISE LEVEL MONUMENT

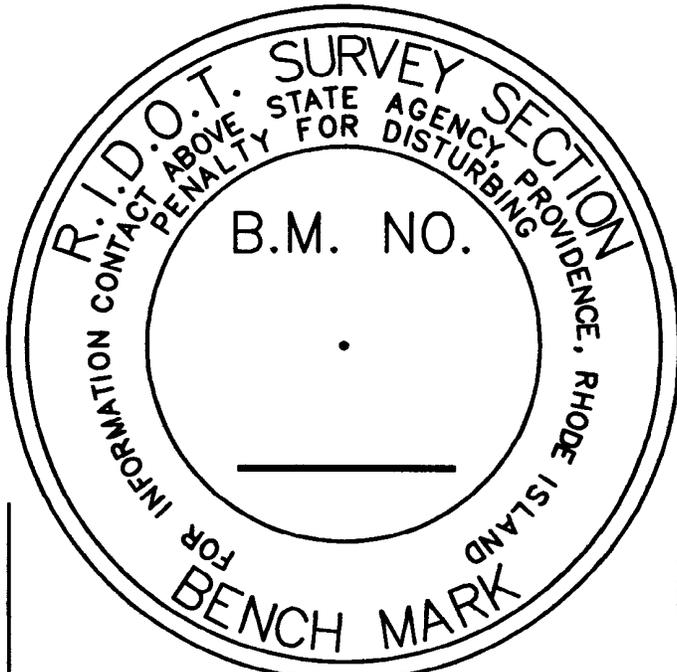
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*James A. Capaldi*  
CHIEF ENGINEER  
TRANSPORTATION

*Edmund J. Parker Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

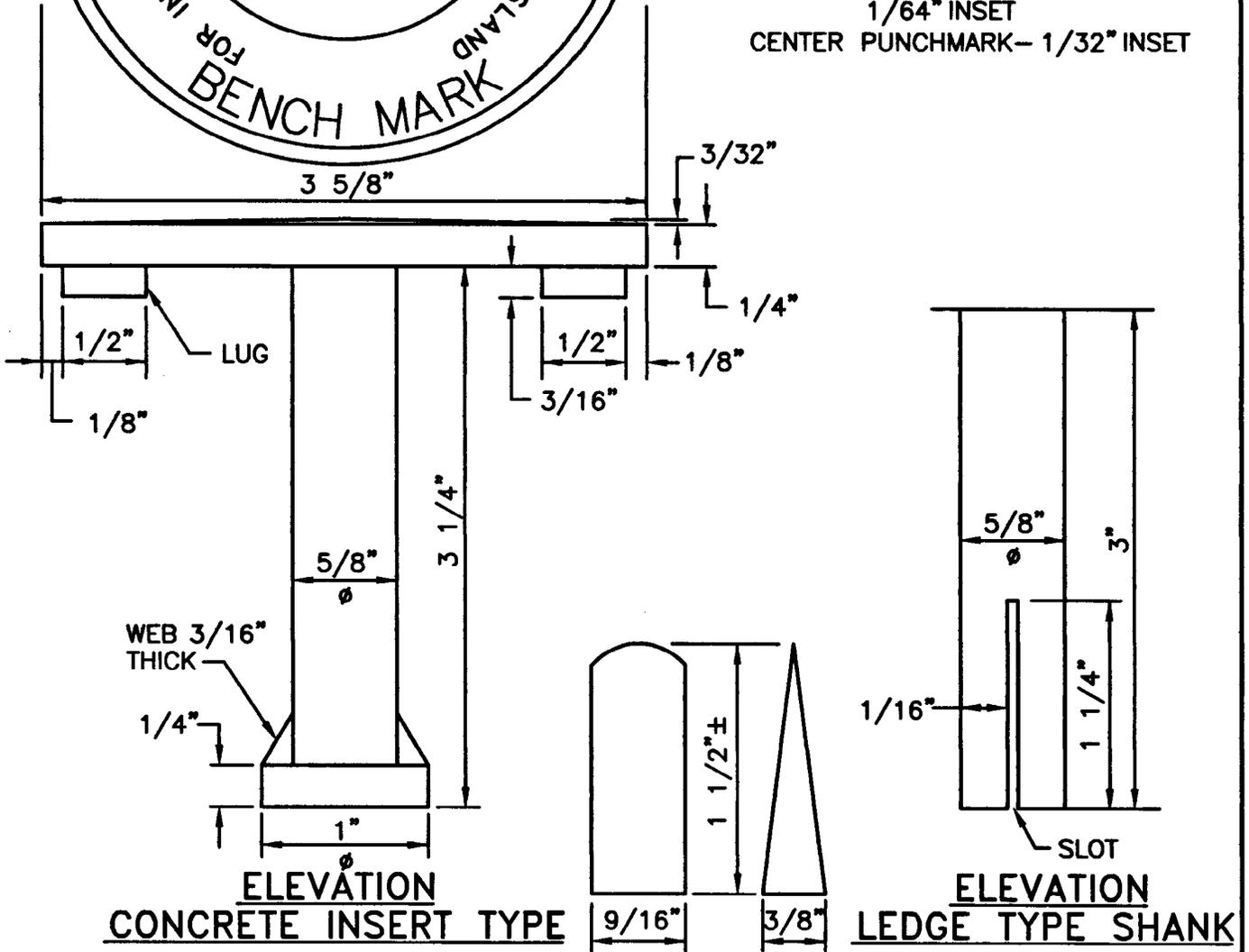
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**NOTES:**

1. SHALL BE IN ACCORDANCE WITH SECTION 915 OF THE R.I. STANDARD SPECIFICATIONS.
2. OUTER LETTERS: 1/4" HIGH  
3/64" STROKE  
1/32" INSET
3. MIDDLE LETTERS: 1/4" HIGH  
1/32" STROKE  
1/64" INSET
4. INNER LETTERS: 3/32" HIGH  
1/32" STROKE  
1/64" INSET
5. CIRCLES: 1/32" STROKE  
1/64" INSET  
CENTER PUNCHMARK- 1/32" INSET



**STEEL WEDGE FOR LEDGE SHANK**

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

**STANDARD BENCH MARK HEADS**

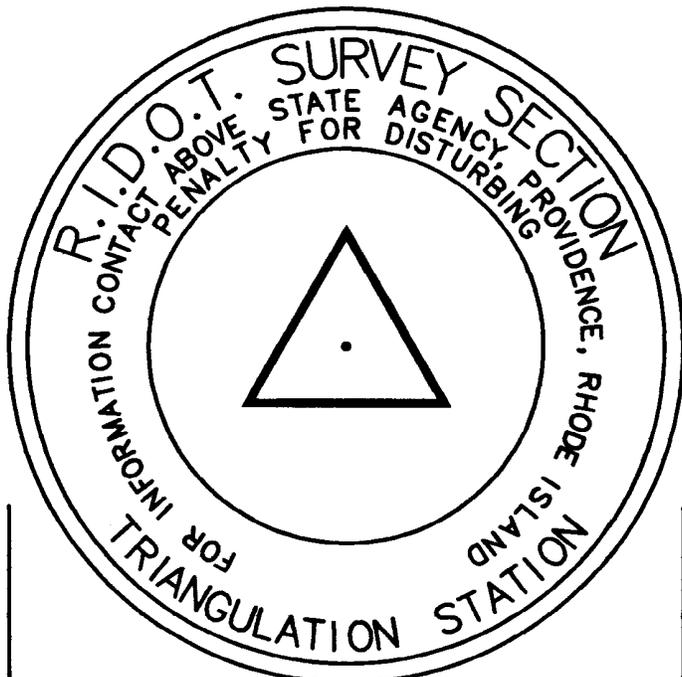
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*James H. Capelli*  
CHIEF ENGINEER  
TRANSPORTATION

*Edmund Parker Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

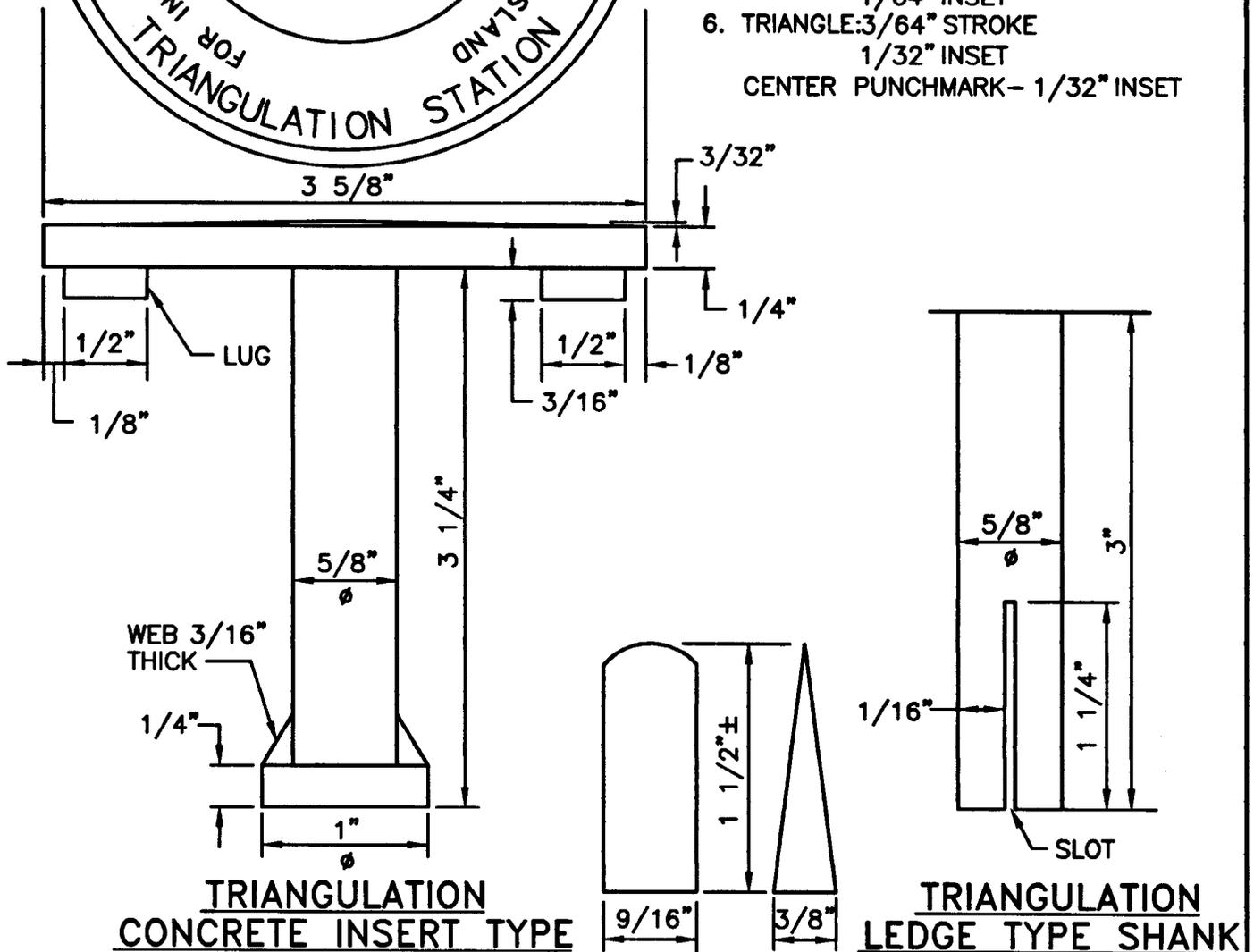
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ISSUE DATE





**NOTES:**

1. SHALL BE IN ACCORDANCE WITH SECTION 915 OF THE R.I. STANDARD SPECIFICATIONS.
2. OUTER LETTERS: 1/4" HIGH  
3/64" STROKE  
1/32" INSET
3. MIDDLE LETTERS: 1/8" HIGH  
1/32" STROKE  
1/64" INSET
4. INNER LETTERS: 3/32" HIGH  
1/32" STROKE  
1/64" INSET
5. CIRCLES: 1/32" STROKE  
1/64" INSET
6. TRIANGLE: 3/64" STROKE  
1/32" INSET  
CENTER PUNCHMARK - 1/32" INSET



**STEEL WEDGE FOR LEDGE SHANK**

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

**STANDARD MARKER  
TRIANGULATION STATION**

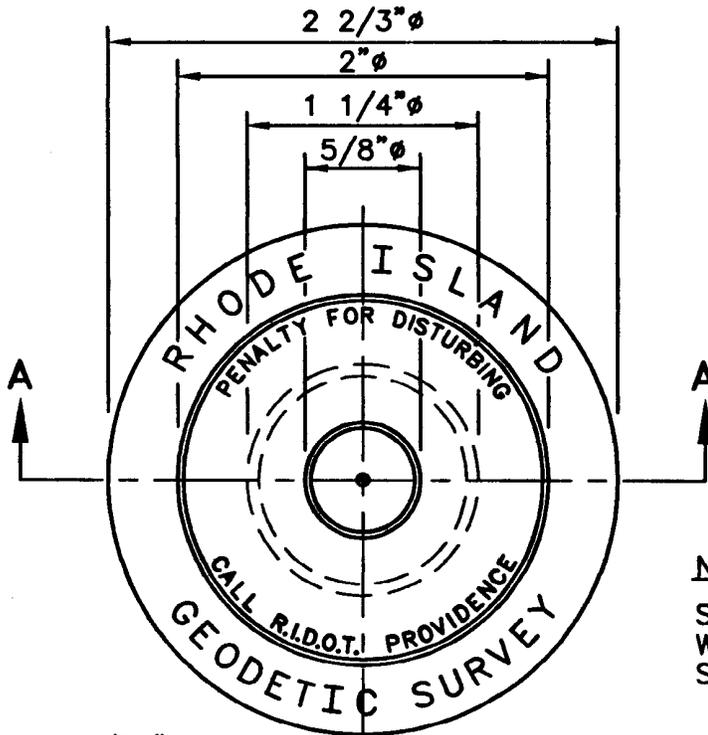
REVISIONS		
NO.	BY	DATE

*James H. Capaldi*  
CHIEF ENGINEER  
TRANSPORTATION

*Edmund J. Perkins Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

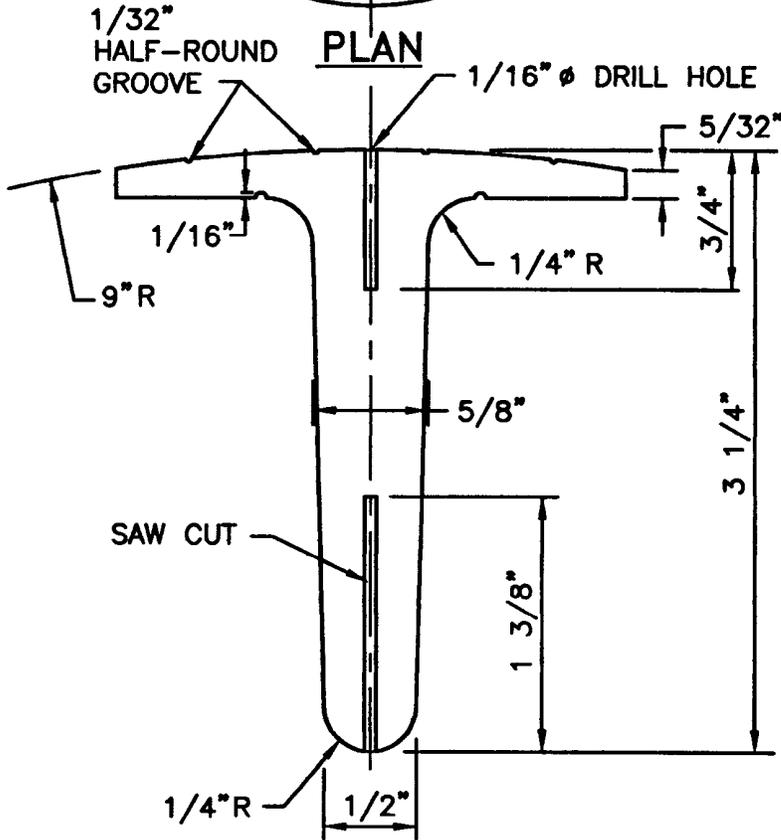
JUNE 15, 1998  
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**NOTE:**

SHALL BE IN ACCORDANCE WITH SECTION 915 OF THE R.I. STANDARD SPECIFICATIONS.



**SECTION A-A**

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

**GEODETIC SURVEY DISK**

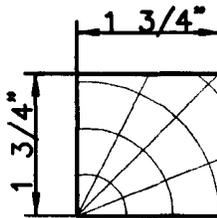
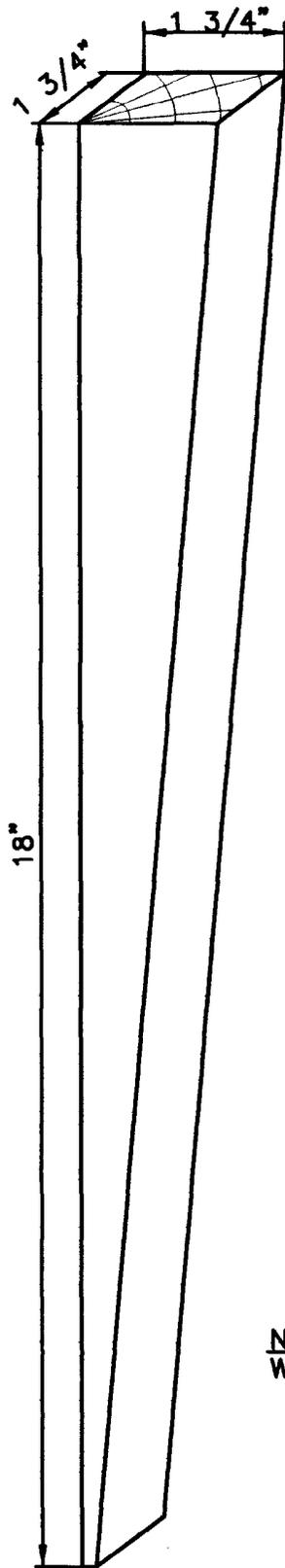
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TRANSPORTATION

*Edmund J. Parker Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

JUNE 15, 1998  
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PLAN

NOTE:  
WEDGE SHALL BE OF SEASONED OAK AND FREE OF KNOTS.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
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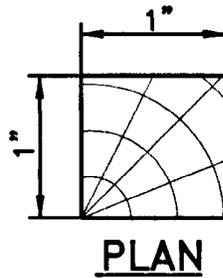
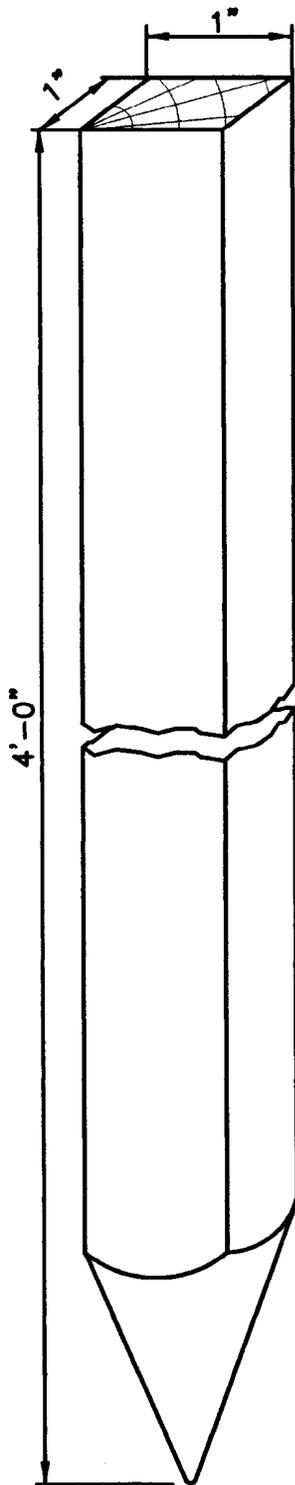
SURVEY WEDGE

*James A. Capaldi*  
CHIEF ENGINEER  
TRANSPORTATION

*Edmund Parker Jr*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

JUNE 15, 1998  
ISSUE DATE





**NOTE:**  
 STAKE SHALL BE OF SEASONED OAK AND FREE OF KNOTS.

**RHODE ISLAND DEPARTMENT OF TRANSPORTATION**

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NO.	BY	DATE

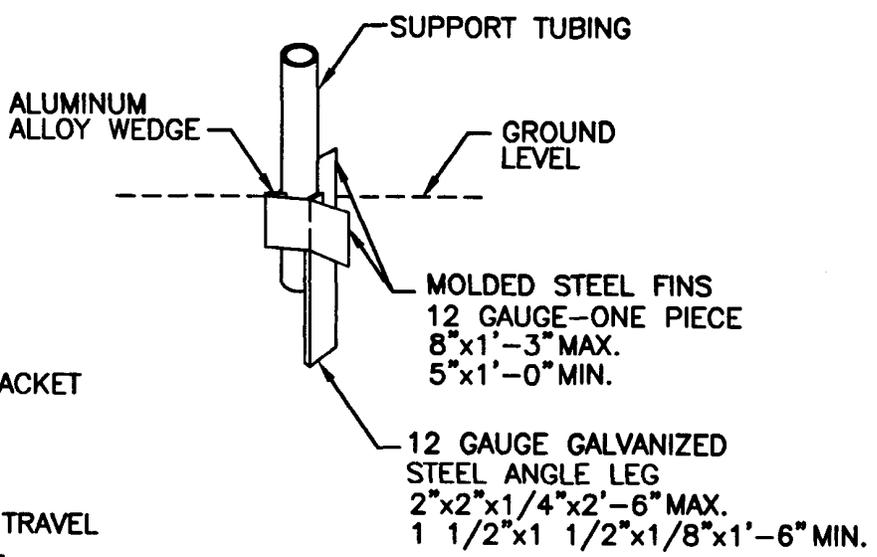
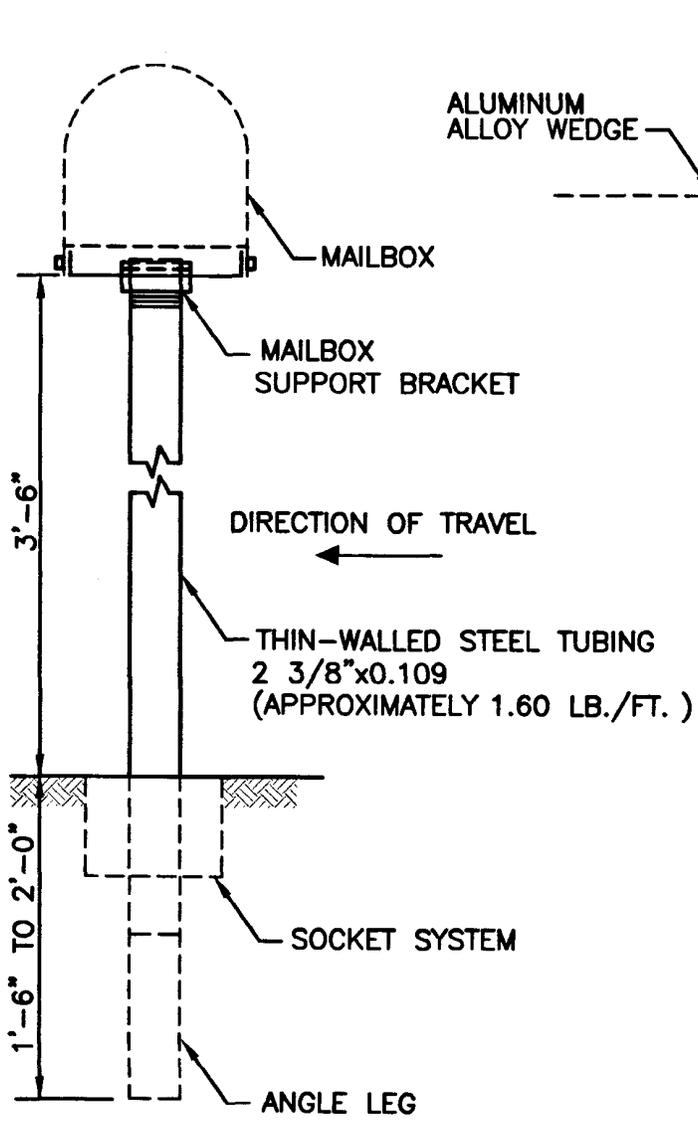
**SURVEY STAKE**

*James H. Casaldi*  
 CHIEF ENGINEER  
 TRANSPORTATION

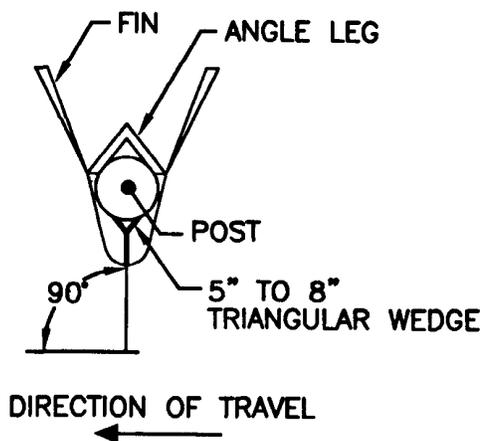
*Edmund Parker Jr.*  
 CHIEF DESIGN ENGINEER  
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 ISSUE DATE





**SOCKET DETAIL**



**SOCKET PLAN VIEW**

**NOTES:**

1. SHALL BE IN ACCORDANCE WITH SECTION 917 OF THE R.I. STANDARD SPECIFICATIONS.
2. CONTRACTOR WILL REPLACE EXISTING BOX IF BOX DOES NOT CONFORM TO U.S. POSTAL SERVICE SPECIFICATIONS. CONTRACTOR SHALL USE U.S. POSTAL SERVICE BOX 1, 1A OR 2.
3. LOCATION OF POSTS TO BE SET UNDER ADVICE OF LOCAL MAIL CARRIER.
4. ALL METAL SURFACES (INCLUDING MAILBOX) AND HARDWARE SHALL BE GALVANIZED WITH A MINIMUM GALVANIZED COATING OF 1.9 MILS.
5. WHEN MORE THAN ONE SUPPORT SYSTEM IS TO BE INSTALLED, THE MINIMUM SPACING OF SUPPORT POSTS SHALL BE 3'-0".
6. USE 8-0.1875"x0.75" BOLTS WITH LOCKWASHERS FOR ALL SIZE BOXES (4 EACH SIDE).

**RHODE ISLAND DEPARTMENT OF TRANSPORTATION**

**POST AND MOUNTING FOR RURAL MAILBOX**

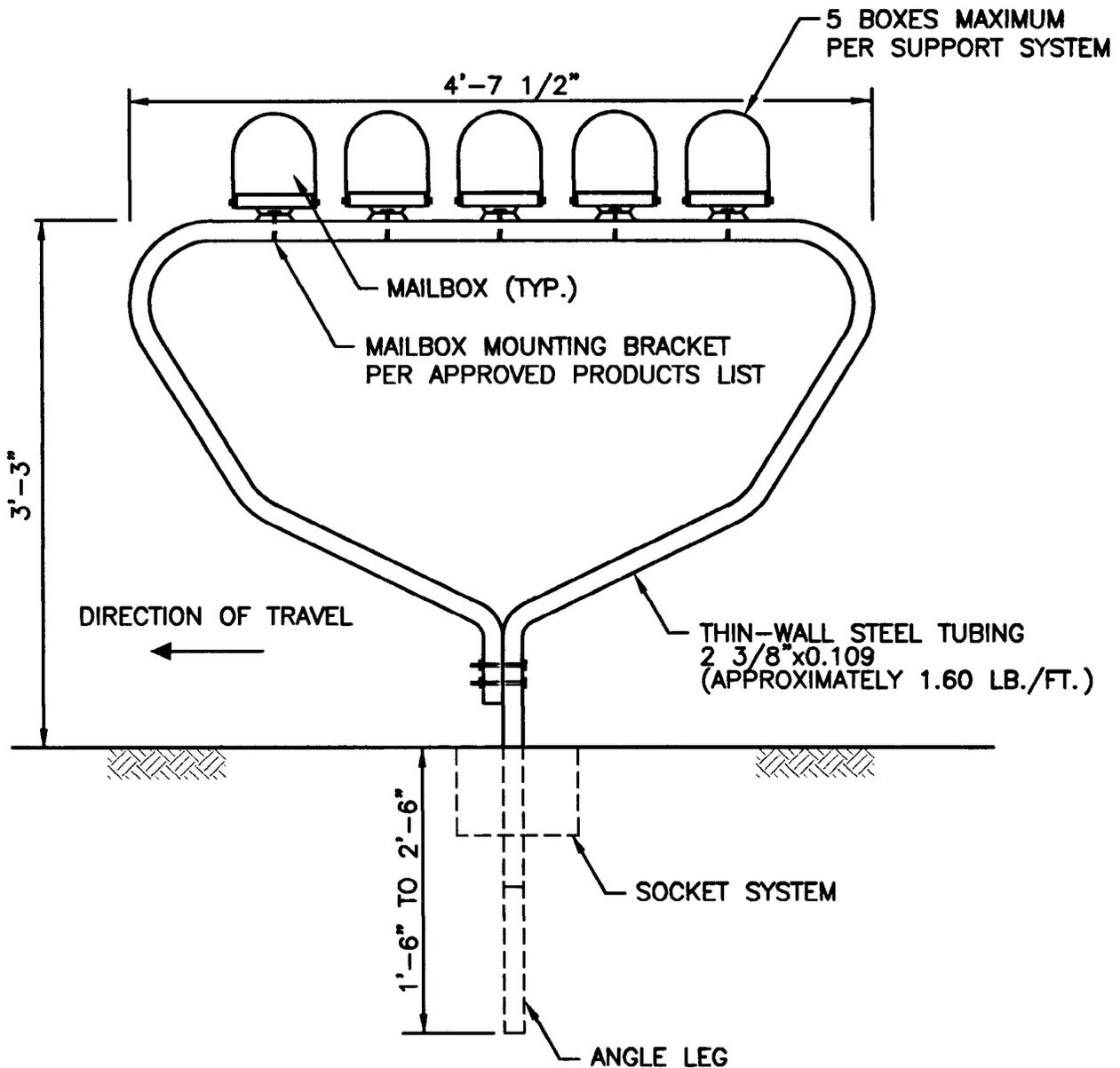
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*James A. Casella*  
CHIEF ENGINEER  
TRANSPORTATION

*Edmund J. Parker Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

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**NOTES:**

1. SHALL BE IN ACCORDANCE WITH SECTION 917 OF THE R.I. STANDARD SPECIFICATIONS.
2. CONTRACTOR SHALL REPLACE EXISTING BOX IF IT DOES NOT CONFORM TO U.S. POSTAL SERVICE SPECIFICATIONS. CONTRACTOR SHALL USE U.S. POSTAL SERVICE BOX 1, 1A OR 2.
3. LOCATION OF POSTS TO BE SET UNDER THE ADVICE OF THE LOCAL MAIL CARRIER.
4. ALL METAL SURFACES (INCLUDING MAILBOX) AND HARDWARE SHALL BE GALVANIZED WITH A MINIMUM GALVANIZED COATING OF 1.9 MILS.
5. WHEN MORE THAN ONE SUPPORT SYSTEM IS TO BE INSTALLED THE MINIMUM SPACING OF THE SUPPORT POSTS SHALL BE 4'-7 1/2\".
6. FOR SOCKET SYSTEM DETAILS SEE STD. 15.1.0.

**RHODE ISLAND DEPARTMENT OF TRANSPORTATION**

REVISIONS		
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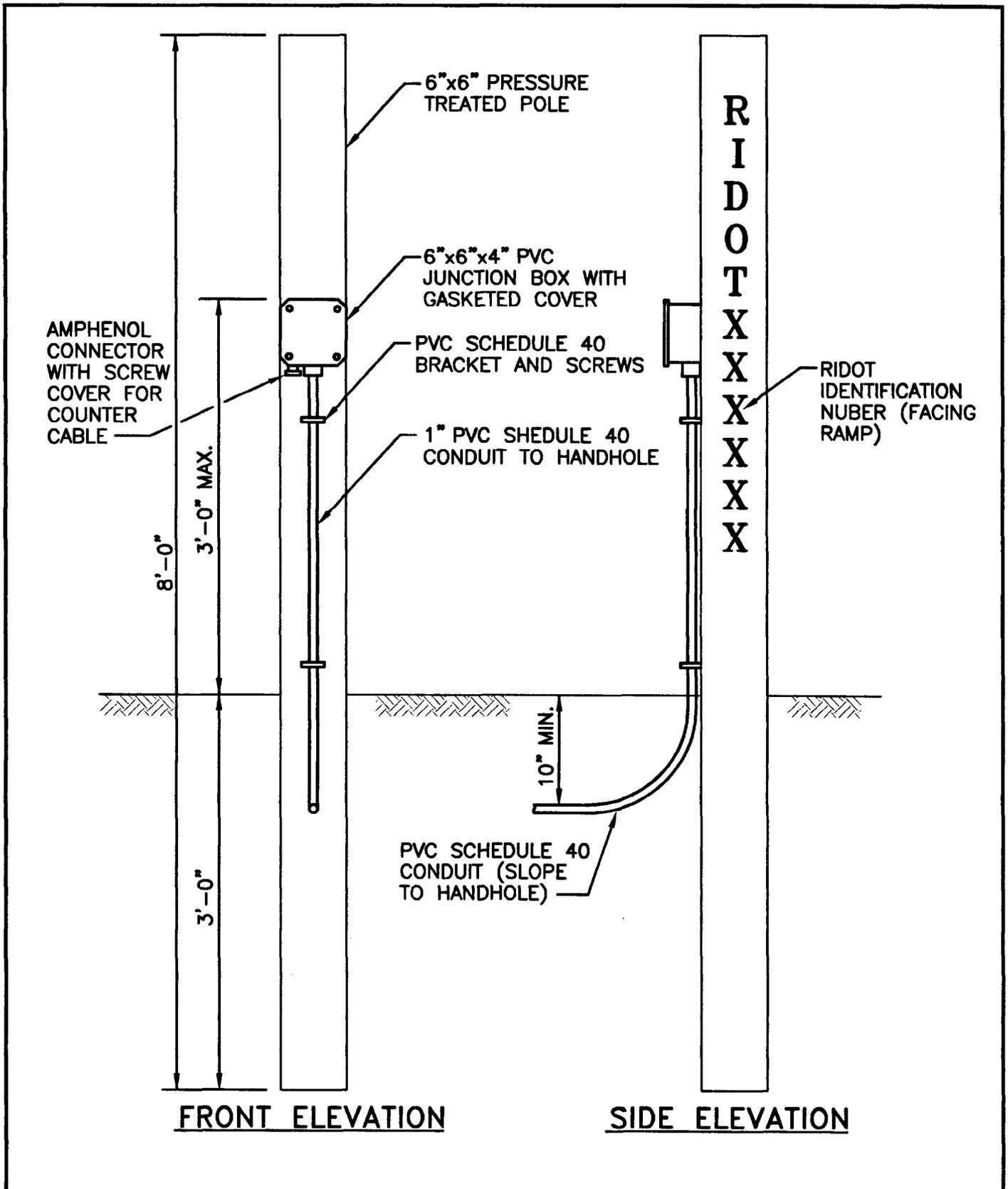
**POST AND MULTIPLE MOUNTINGS  
FOR RURAL MAILBOXES**

*James H. Casali*  
CHIEF ENGINEER  
TRANSPORTATION

*Edmund Parker Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

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RHODE ISLAND DEPARTMENT OF TRANSPORTATION

TRAFFIC MONITORING STATION  
SINGLE JUNCTION BOX WOOD POST DETAIL

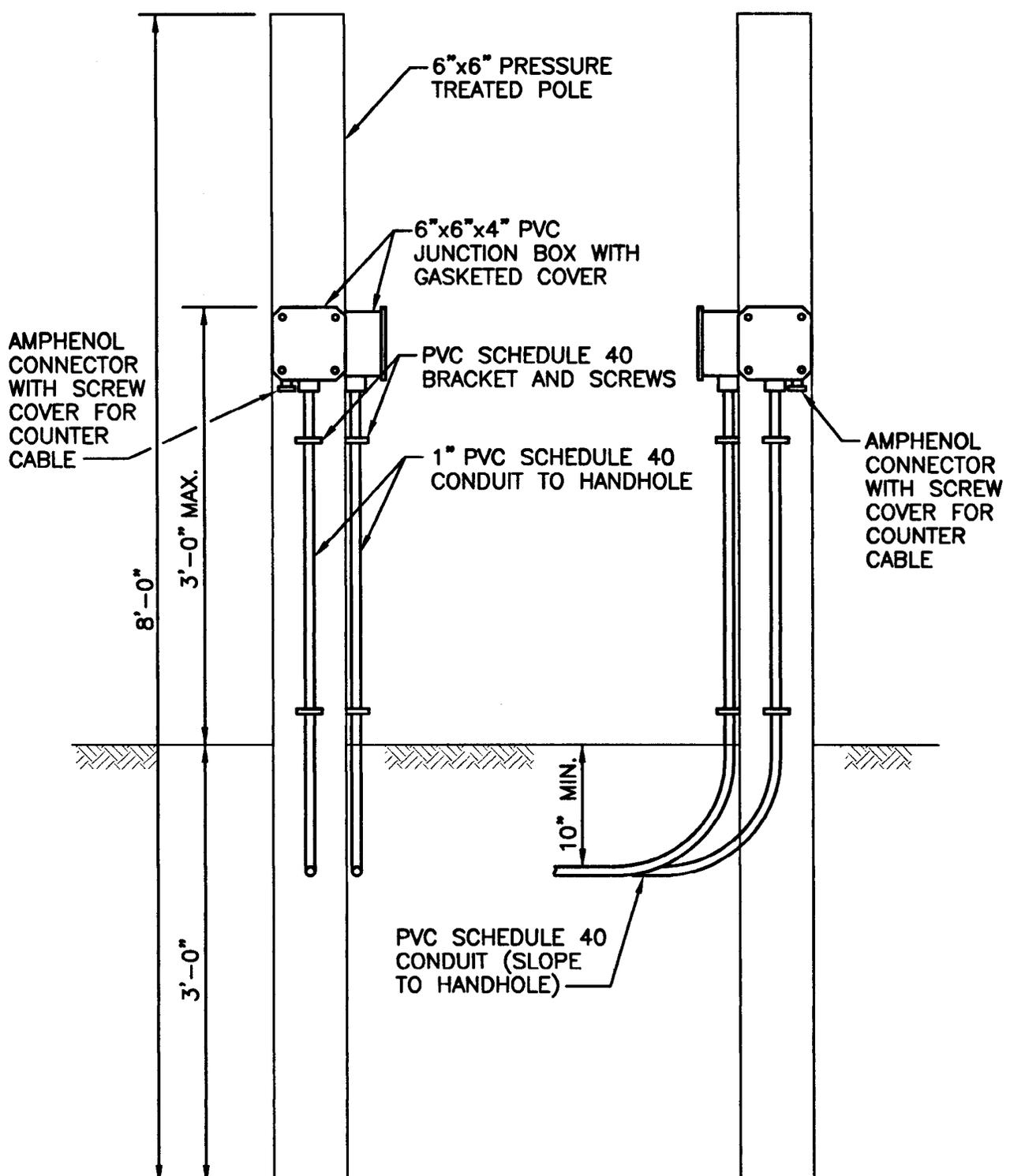
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*James N. Casabelli*  
CHIEF ENGINEER  
TRANSPORTATION

*Edmund J. Parker Jr.*  
CHIEF DESIGN ENGINEER  
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**FRONT ELEVATION**

**SIDE ELEVATION**

**RHODE ISLAND DEPARTMENT OF TRANSPORTATION**

**TRAFFIC MONITORING STATION  
DOUBLE JUNCTION BOX WOOD POST DETAIL**

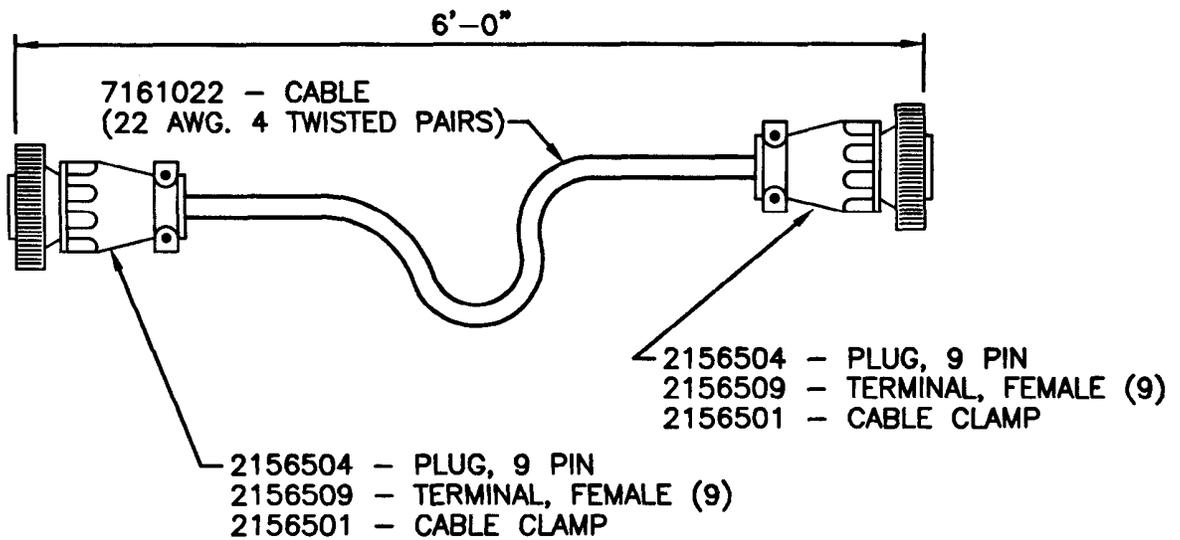
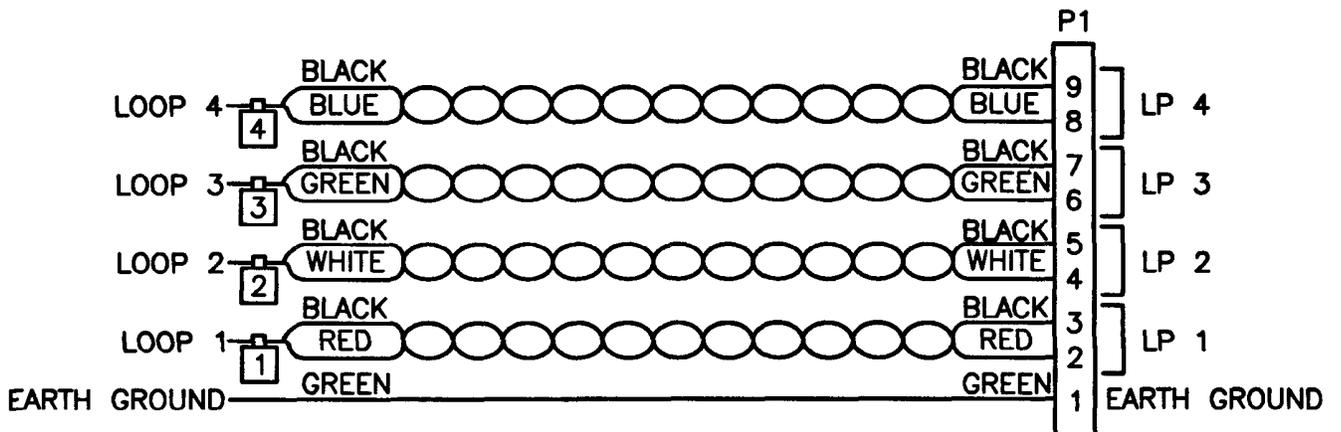
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*James H. Casabelli*  
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TRANSPORTATION

*Edmund J. Parker Jr.*  
CHIEF DESIGN ENGINEER  
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RHODE ISLAND DEPARTMENT OF TRANSPORTATION

TRAFFIC MONITORING STATION  
PORTABLE COMPUTER CABLE

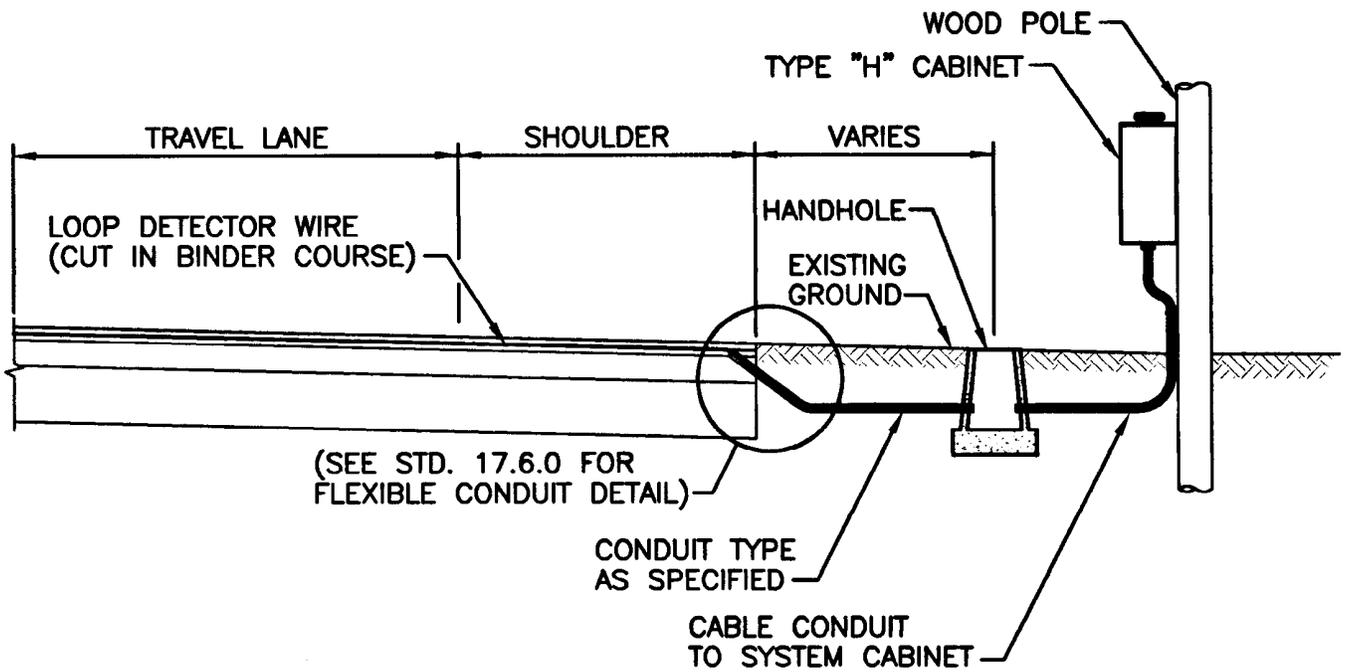
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RHODE ISLAND DEPARTMENT OF TRANSPORTATION

TRAFFIC MONITORING STATION  
POLE MOUNTED CABINET

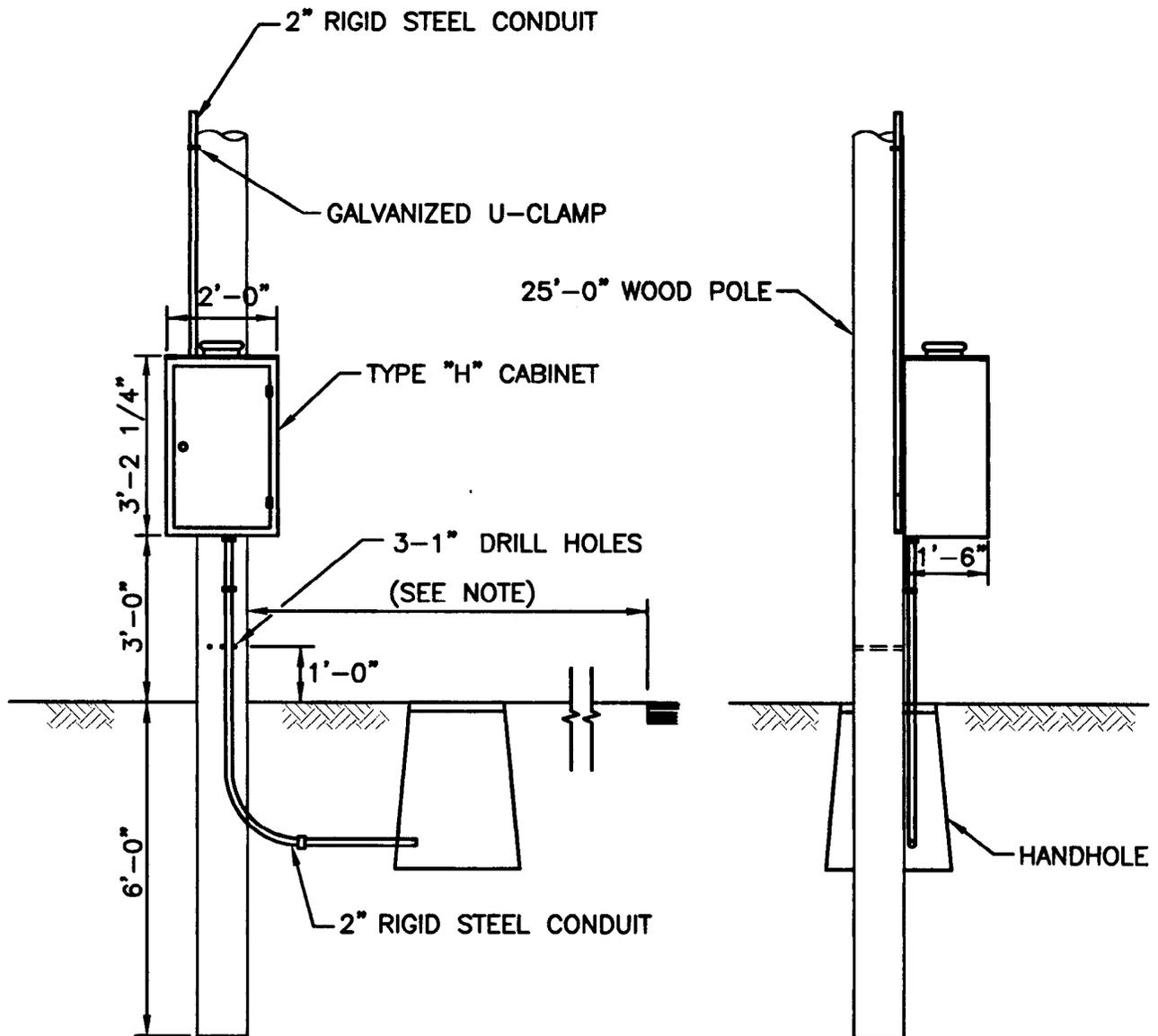
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TRANSPORTATION

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CHIEF DESIGN ENGINEER  
TRANSPORTATION

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FRONT ELEVATION

SIDE ELEVATION

**NOTE:**

1. TYPE "H" CABINET MUST BE LOCATED A MIN. OF 30'-0" FROM PAVED HIGHWAY SURFACE OR LOCATED BEHIND A PROTECTIVE BARRIER.
2. PROVIDE WEATHER HEAD AT TOP OF POLE.

**RHODE ISLAND DEPARTMENT OF TRANSPORTATION**

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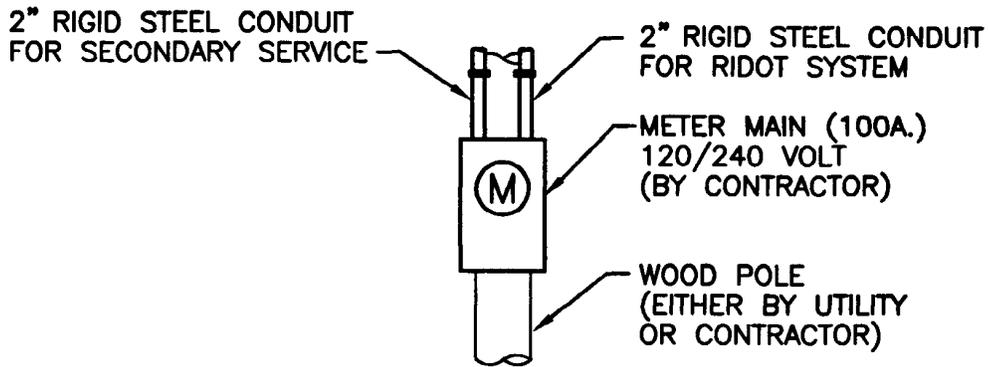
**TRAFFIC MONITORING STATION  
TYPE "H" CABINET  
POST MOUNTED INSTALLATION**

*James A. Casabdi*  
CHIEF ENGINEER  
TRANSPORTATION

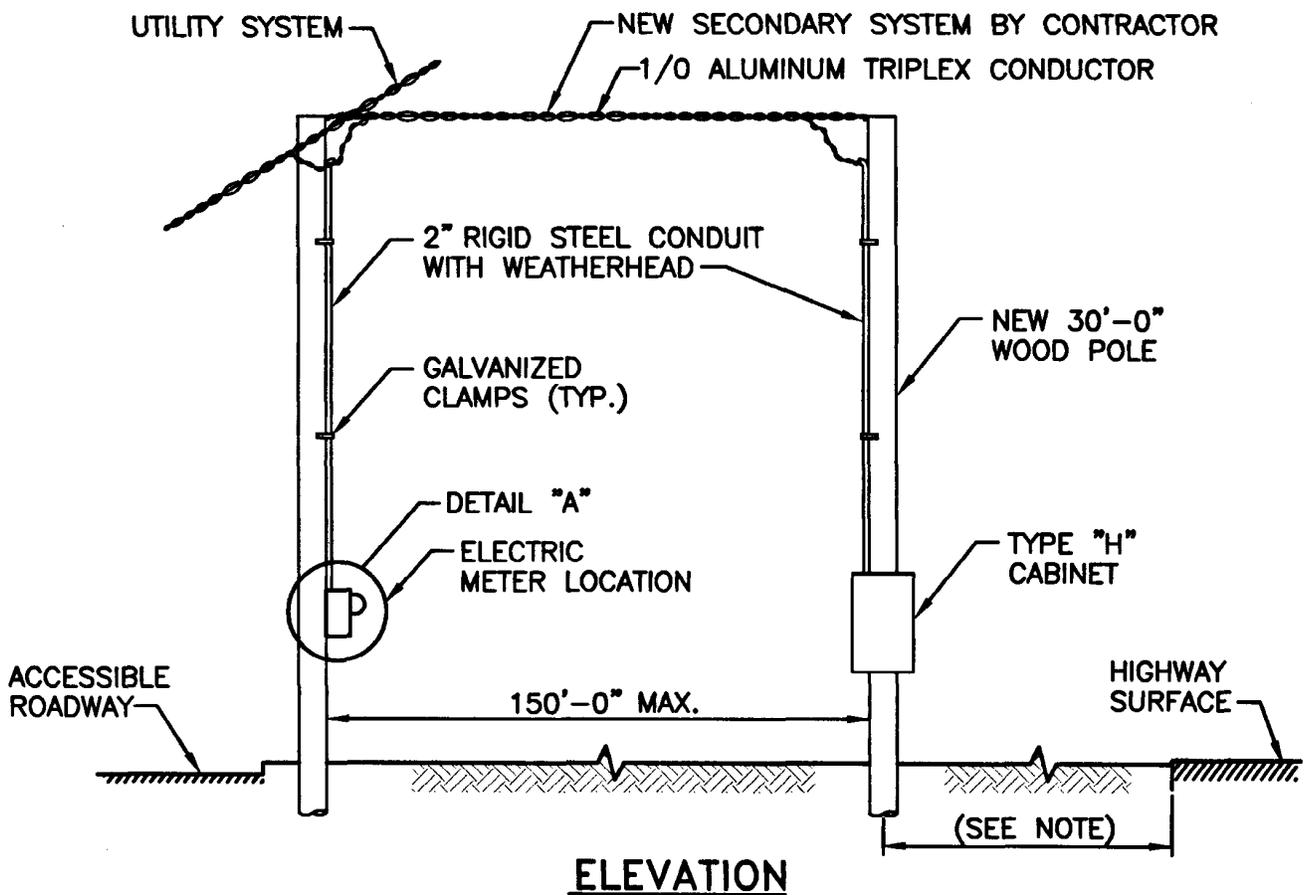
*Edmund J. Parker Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

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**DETAIL "A"**



**ELEVATION**

**NOTE:**

TYPE "H" CABINET MUST BE LOCATED A MINIMUM OF 30'-0" FROM PAVED HIGHWAY SURFACE OR LOCATED BEHIND A PROTECTIVE BARRIER.

**RHODE ISLAND DEPARTMENT OF TRANSPORTATION**

REVISIONS		
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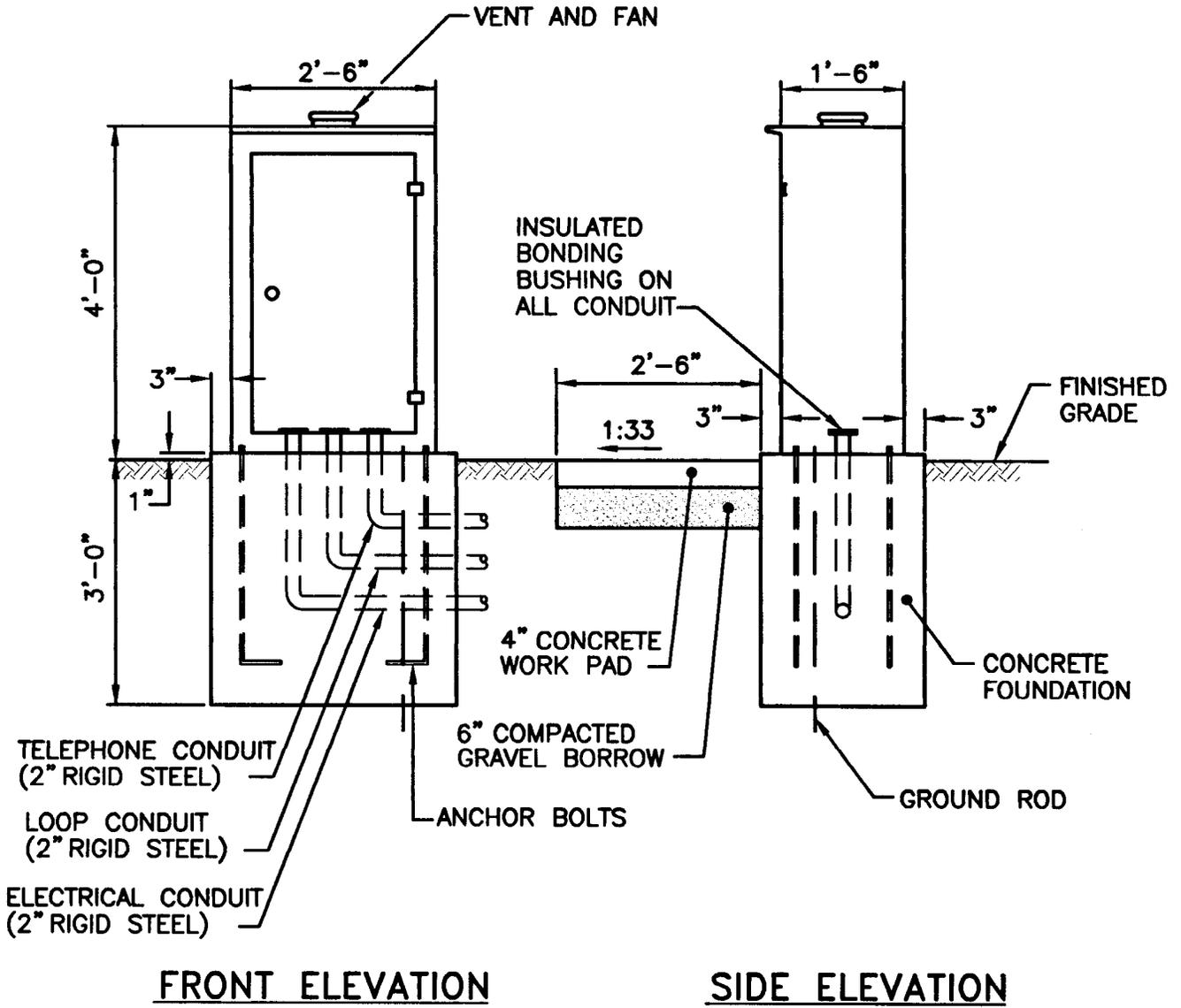
**TRAFFIC MONITORING STATION  
TYPE "H" CABINET - ELECTRIC SERVICE**

*James H. Casabelli*  
CHIEF ENGINEER  
TRANSPORTATION

*Edmund J. Parker Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

JUNE 15, 1998  
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**NOTE:**  
 GASKET AND/OR CAULKING TO BE APPLIED BETWEEN CABINET AND FOUNDATION TO PROVIDE A PERMANENT WEATHERTIGHT SEAL.

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**TRAFFIC MONITORING STATION  
 CONTROLLER CABINET  
 GROUND MOUNTED INSTALLATION**

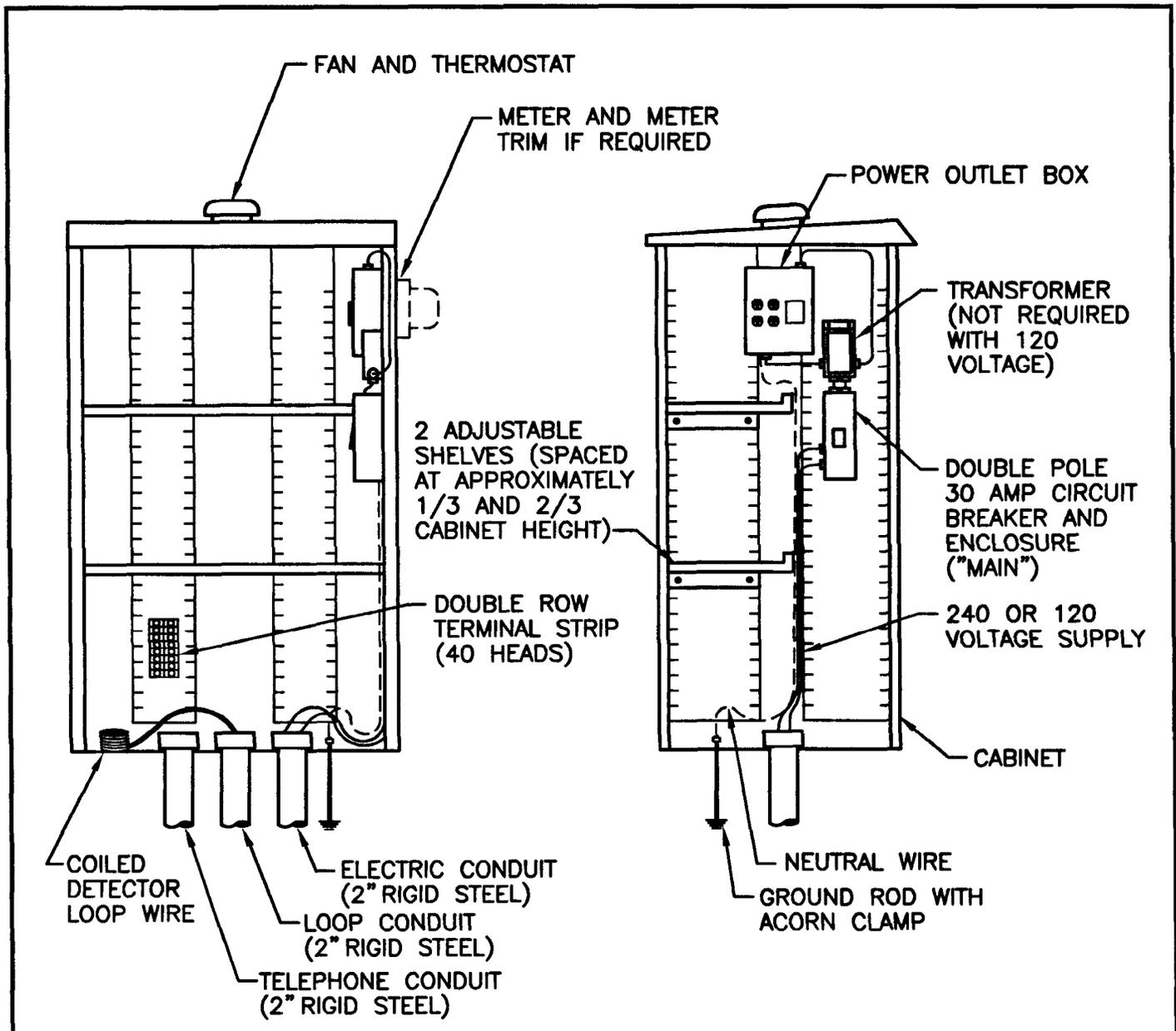
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*Jovan N. Capaldi*  
 CHIEF ENGINEER  
 TRANSPORTATION

*Edmund Parker Jr.*  
 CHIEF DESIGN ENGINEER  
 TRANSPORTATION

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**FRONT SECTION**

**SIDE SECTION**

**NOTES:**

1. TRANSFORMER MUST BE WIRED TO ALLOW 120 SECONDARY VOLTAGE AT POWER OUTLET BOX.
2. WIRING SHOWN WITHOUT METER. IF METER IS REQUIRED, WIRE METER BETWEEN CONDUIT AND "MAIN."
3. 3/4" MARINE PLYWOOD TO BE USED AS BACKING TO MOUNT ACCESSORIES.
4. DOUBLE POLE BREAKER SWITCH REQUIRED FOR 220 VOLTAGE ONLY. SINGLE POLE BREAKER WITH ENCLOSURE MAY BE USED FOR 110 VOLTAGE.
5. INSTALLATION TO INCLUDE TELEPHONE JACK, PULL CHAIN LIGHT AND SURGE ARRESTOR.
6. PROVIDE 60 AMP SERVICE.

**RHODE ISLAND DEPARTMENT OF TRANSPORTATION**

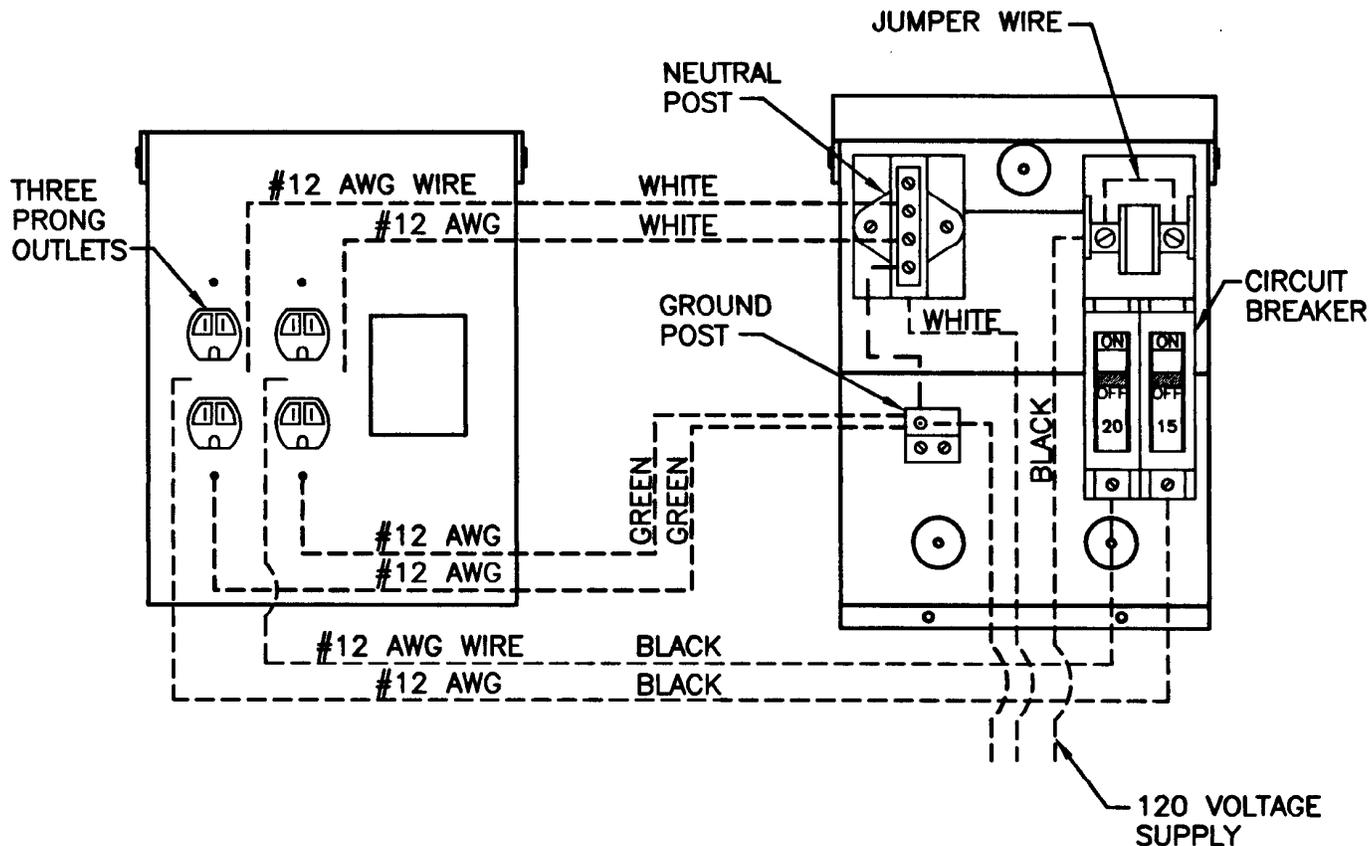
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**TRAFFIC MONITORING STATION  
CONTROLLER CABINET  
WIRING DETAILS - INTERIOR**




CHIEF ENGINEER TRANSPORTATION      CHIEF DESIGN ENGINEER TRANSPORTATION      JUNE 15, 1998  
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COVER AND OUTLETS

POWER OUTLET BOX

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

TRAFFIC MONITORING STATION  
POWER OUTLET BOX

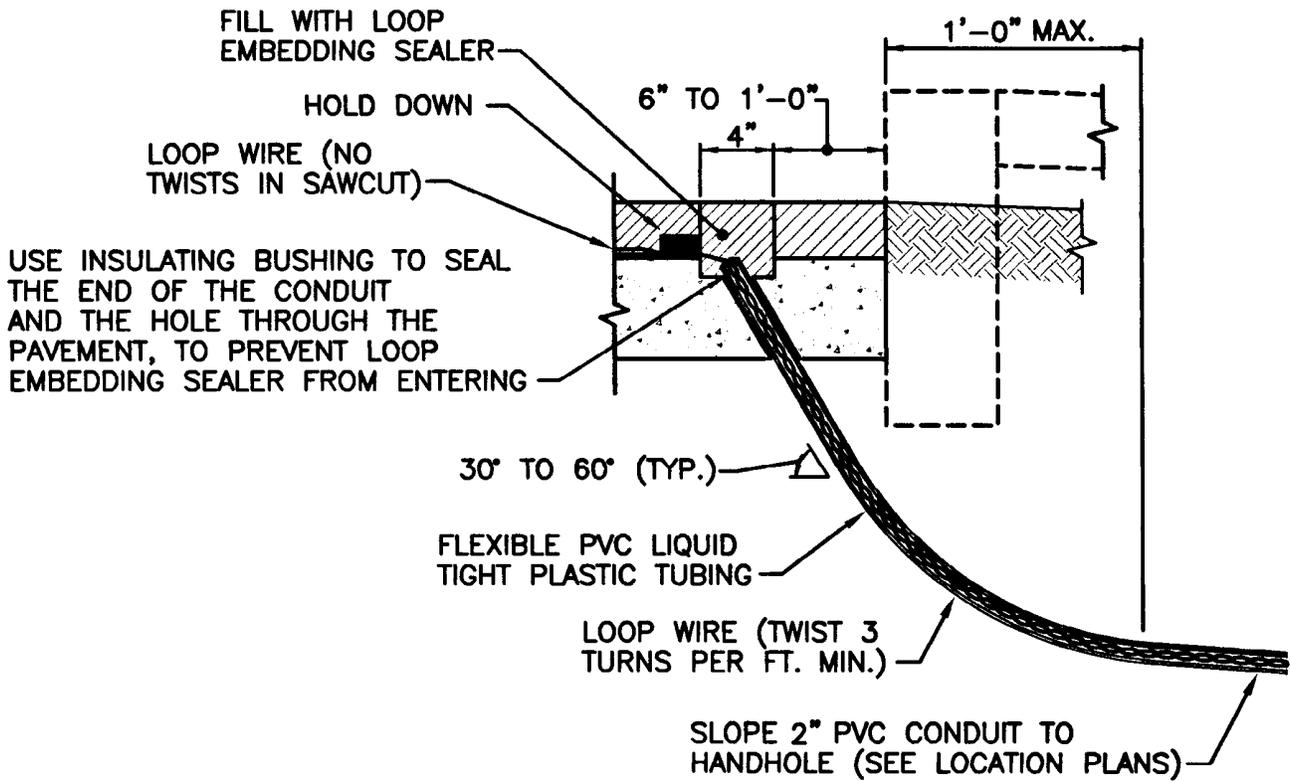
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CHIEF ENGINEER  
TRANSPORTATION

*Edmund J. Parker Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

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**NOTES:**

1. DO NOT USE SHARP OBJECTS TO HOLD DOWN WIRE.
2. CURB DETAIL IS SHOWN BY DASHED LINES, RUN THE CONDUIT UNDER THE CURB.

**RHODE ISLAND DEPARTMENT OF TRANSPORTATION**

**TRAFFIC MONITORING STATION  
FLEXIBLE CONDUIT INSTALLATION**

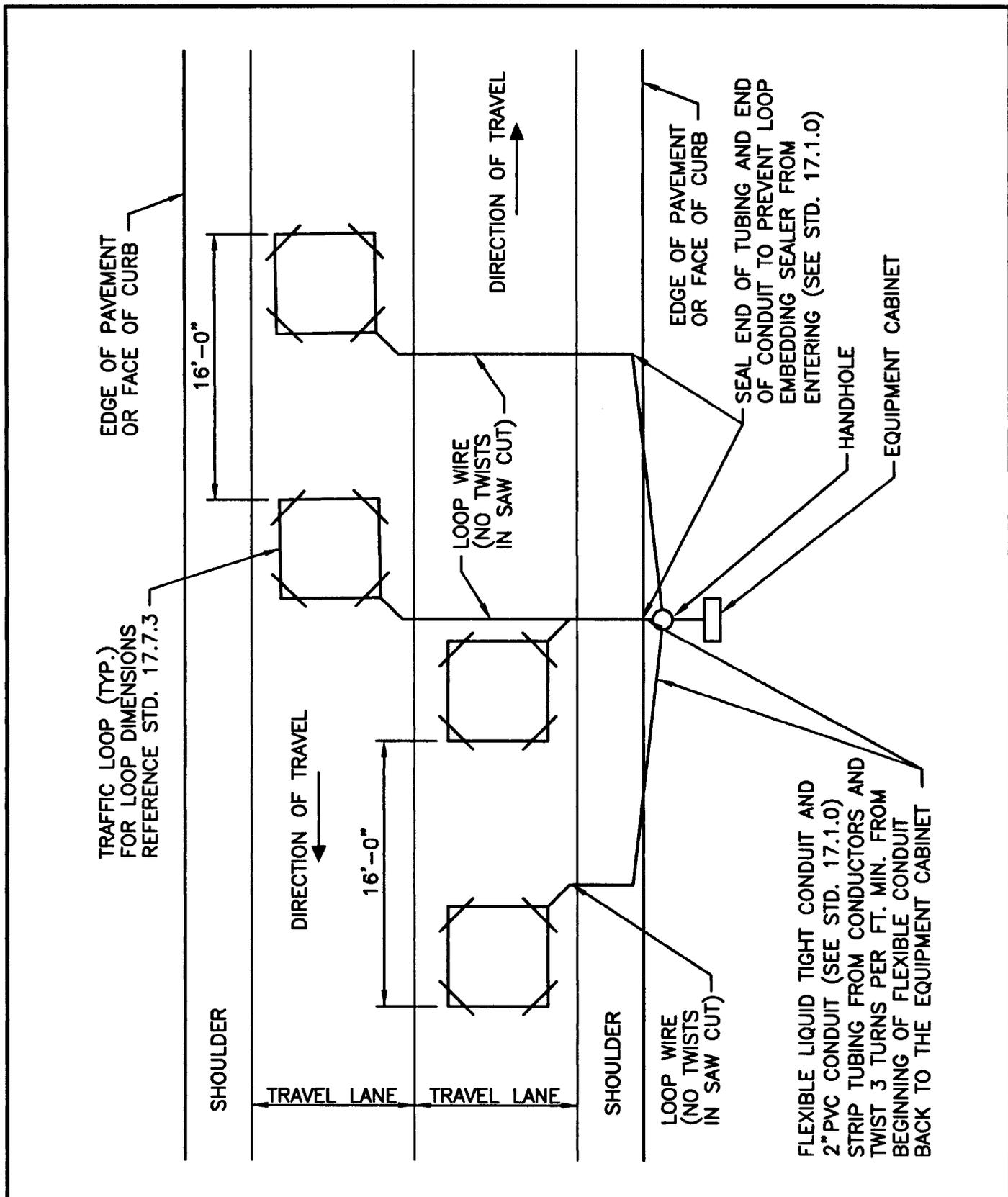
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TRANSPORTATION

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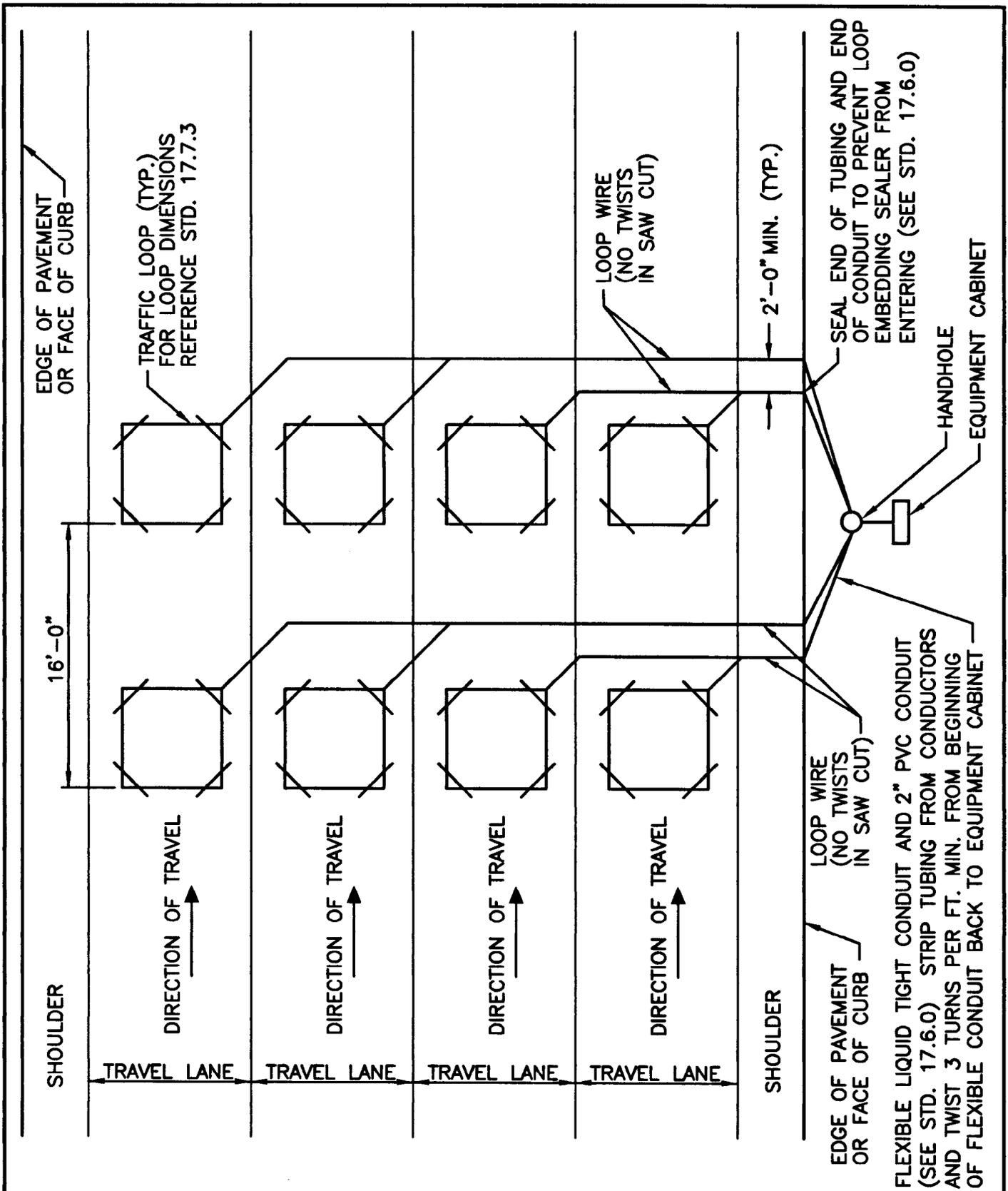
TRAFFIC MONITORING STATION  
 LOOP WIRE LAYOUT  
 FOR DIRECTIONAL COUNTING

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 CHIEF ENGINEER  
 TRANSPORTATION

*Edmund J. Parker Jr.*  
 CHIEF DESIGN ENGINEER  
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TRAFFIC MONITORING STATION  
 LOOP WIRE LAYOUT  
 FOR MULTIPLE LANES IN THE SAME DIRECTION

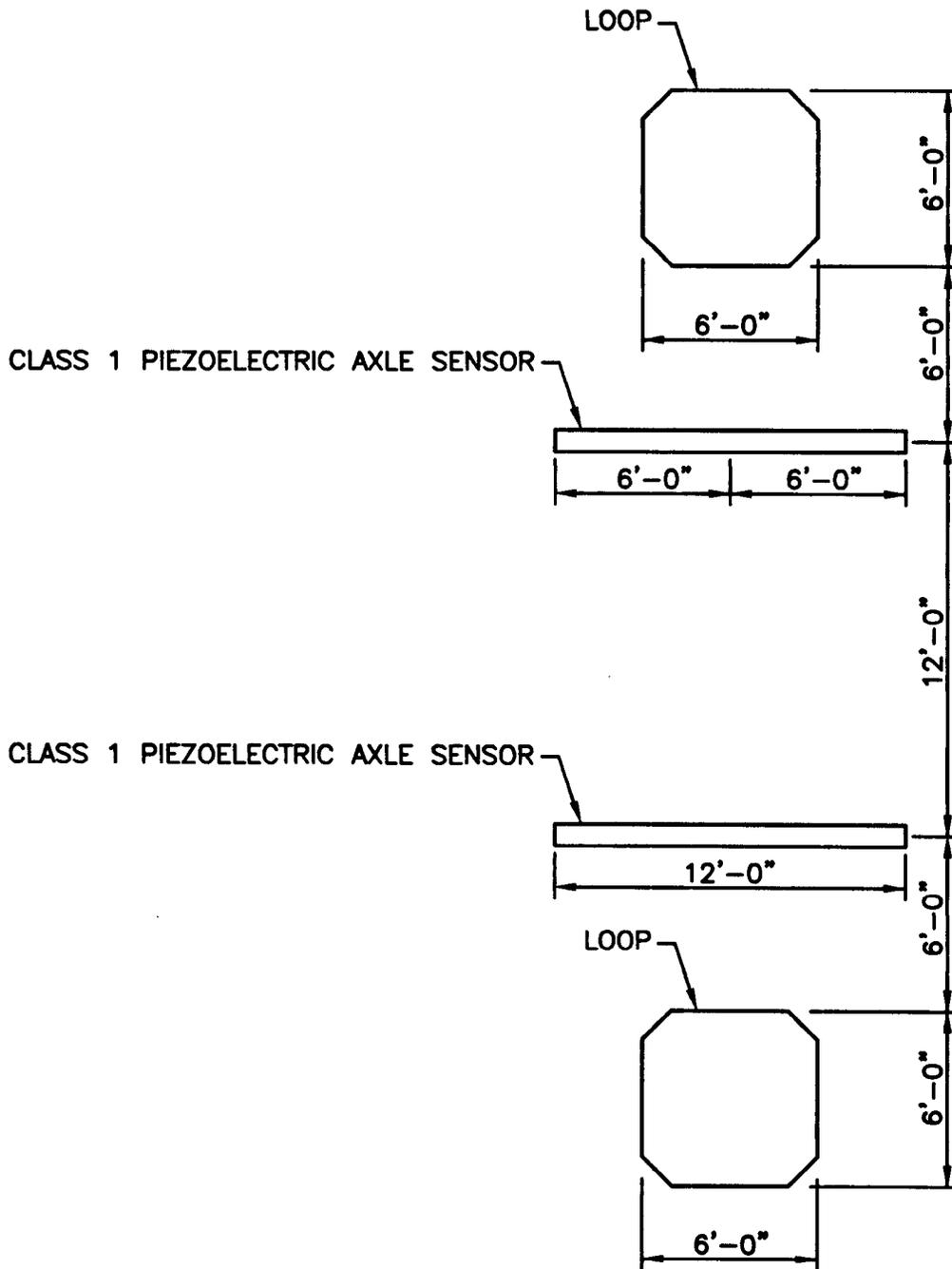
REVISIONS		
NO.	BY	DATE

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 TRANSPORTATION

*Edward J. Parker Jr.*  
 CHIEF DESIGN ENGINEER  
 TRANSPORTATION

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TRAFFIC MONITORING STATION  
AXLE SENSOR AND LOOP LAYOUT

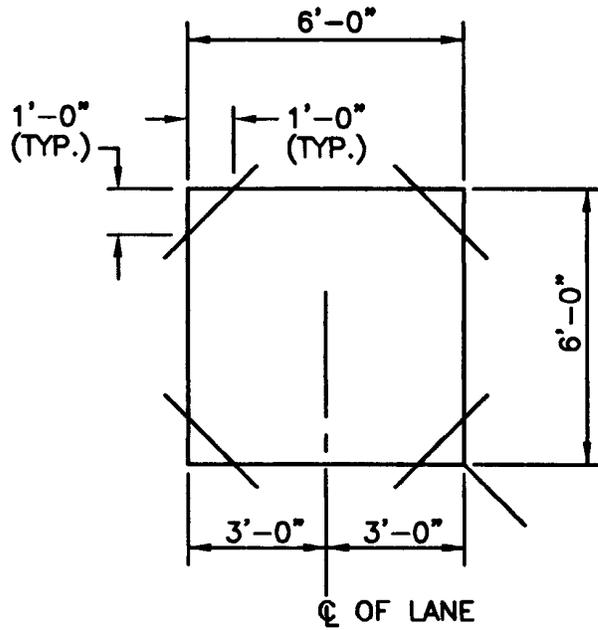
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CHIEF ENGINEER  
TRANSPORTATION

*Edmund J. Parker Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

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RHODE ISLAND DEPARTMENT OF TRANSPORTATION

TRAFFIC MONITORING STATION  
LOOP DIMENSIONS

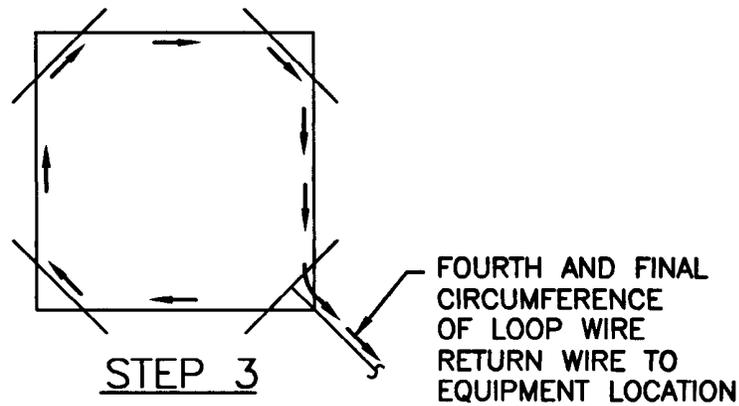
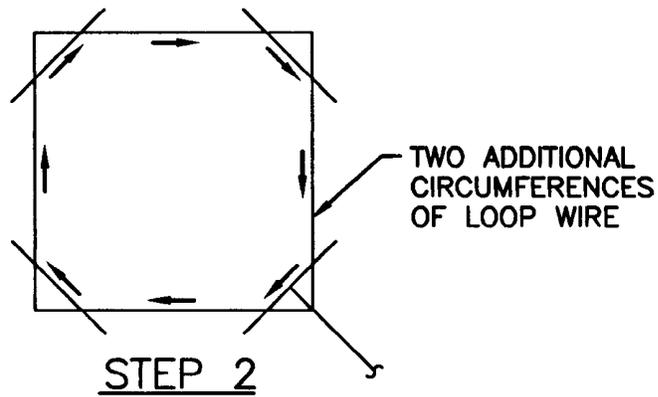
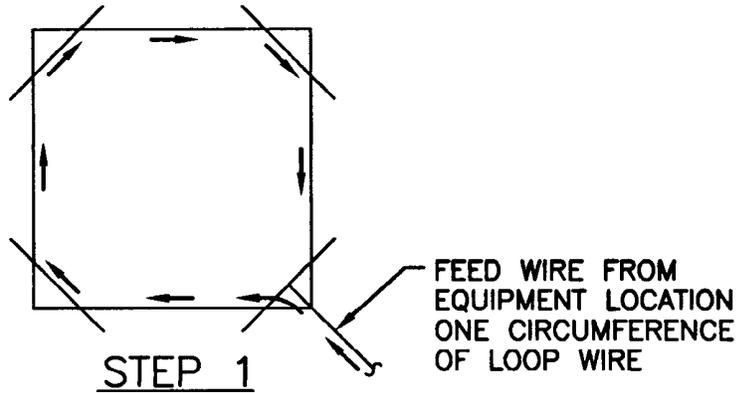
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CHIEF ENGINEER  
TRANSPORTATION

*Edmund J. Parker Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

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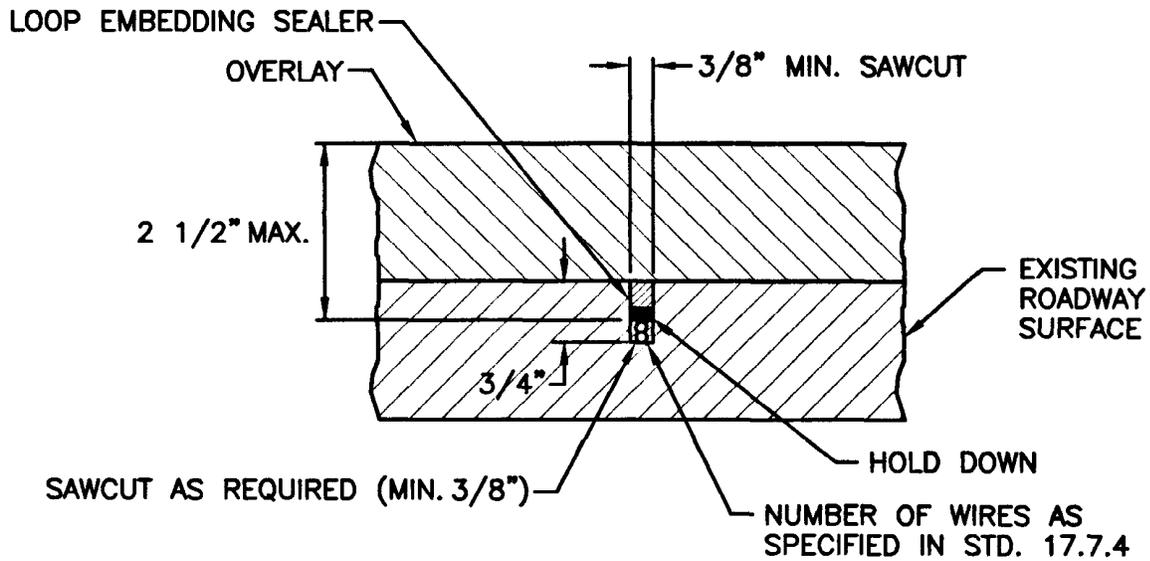
**TRAFFIC MONITORING STATION  
LOOP WIRE INSTALLATION**

*James A. Casabelli*  
CHIEF ENGINEER  
TRANSPORTATION

*Edmund J. Parker Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

JUNE 15, 1998  
ISSUE DATE





**NOTE:**

USE SHORT (2" TYP.) PIECES OF OPEN CELLED POLYURETHANE BACKER ROD FOAM SEALER STRIPS AT 2'-0" CENTERS TO HOLD LOOP WIRES IN PLACE UNTIL SEALER SETS. DO NOT USE SHARP OBJECTS TO HOLD WIRE DOWN.

**RHODE ISLAND DEPARTMENT OF TRANSPORTATION**

REVISIONS		
NO.	BY	DATE

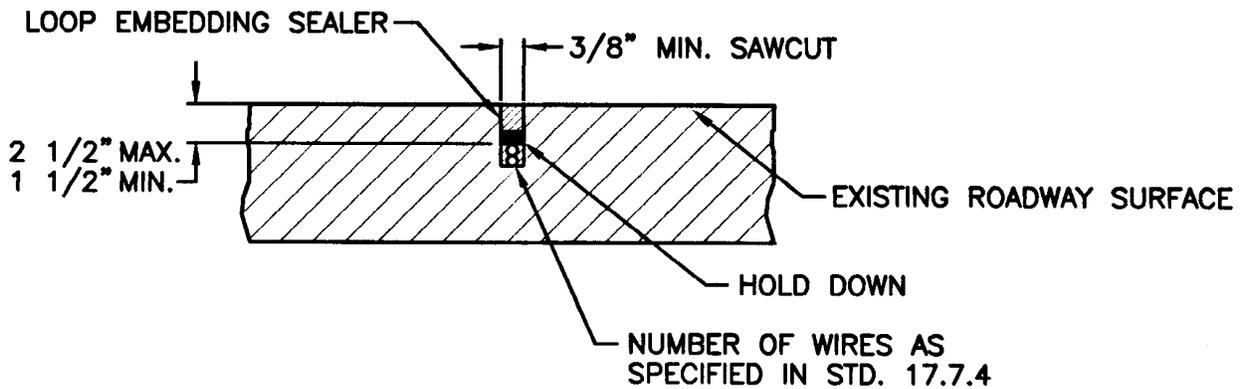
**TRAFFIC MONITORING STATION  
SAWCUT CROSS-SECTION  
WITH A PAVEMENT OVERLAY**

*James H. Casella*  
CHIEF ENGINEER  
TRANSPORTATION

*Edmund J. Parker Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

JUNE 15, 1998  
ISSUE DATE





**NOTE:**

USE SHORT (2" TYP.) PIECES OF OPEN CELLED POLYURETHANE BACKER ROD FOAM SEALER STRIPS AT 2'-0" CENTERS TO HOLD LOOP WIRES IN PLACE UNTIL SEALER SETS. DO NOT USE SHARP OBJECTS TO HOLD WIRE DOWN.

**RHODE ISLAND DEPARTMENT OF TRANSPORTATION**

REVISIONS		
NO.	BY	DATE

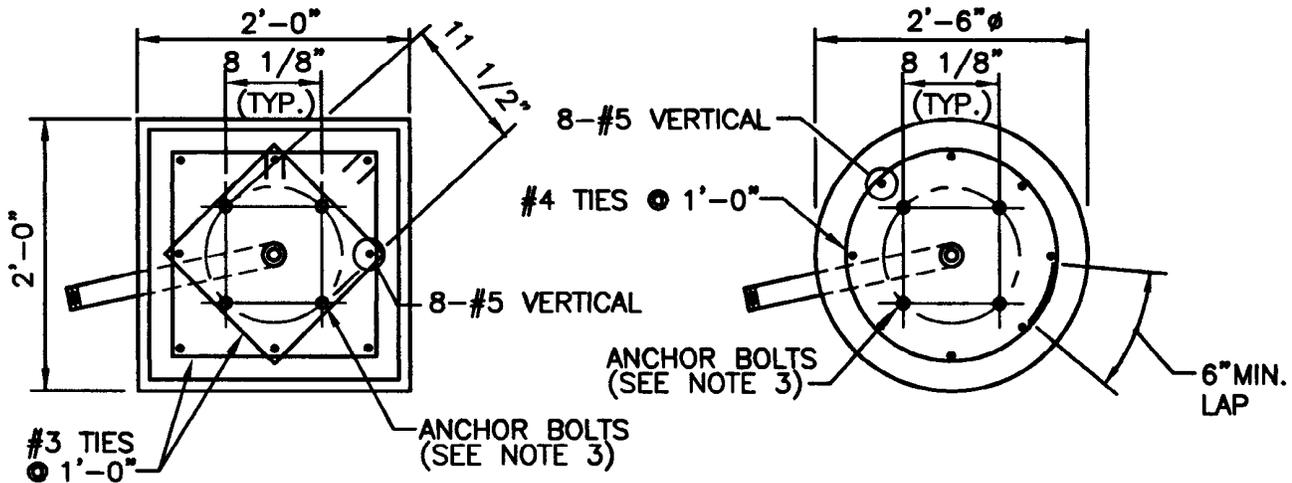
**TRAFFIC MONITORING STATION  
SAWCUT CROSS-SECTION  
WITHOUT A PAVEMENT OVERLAY**

*James A. Capelli*  
CHIEF ENGINEER  
TRANSPORTATION

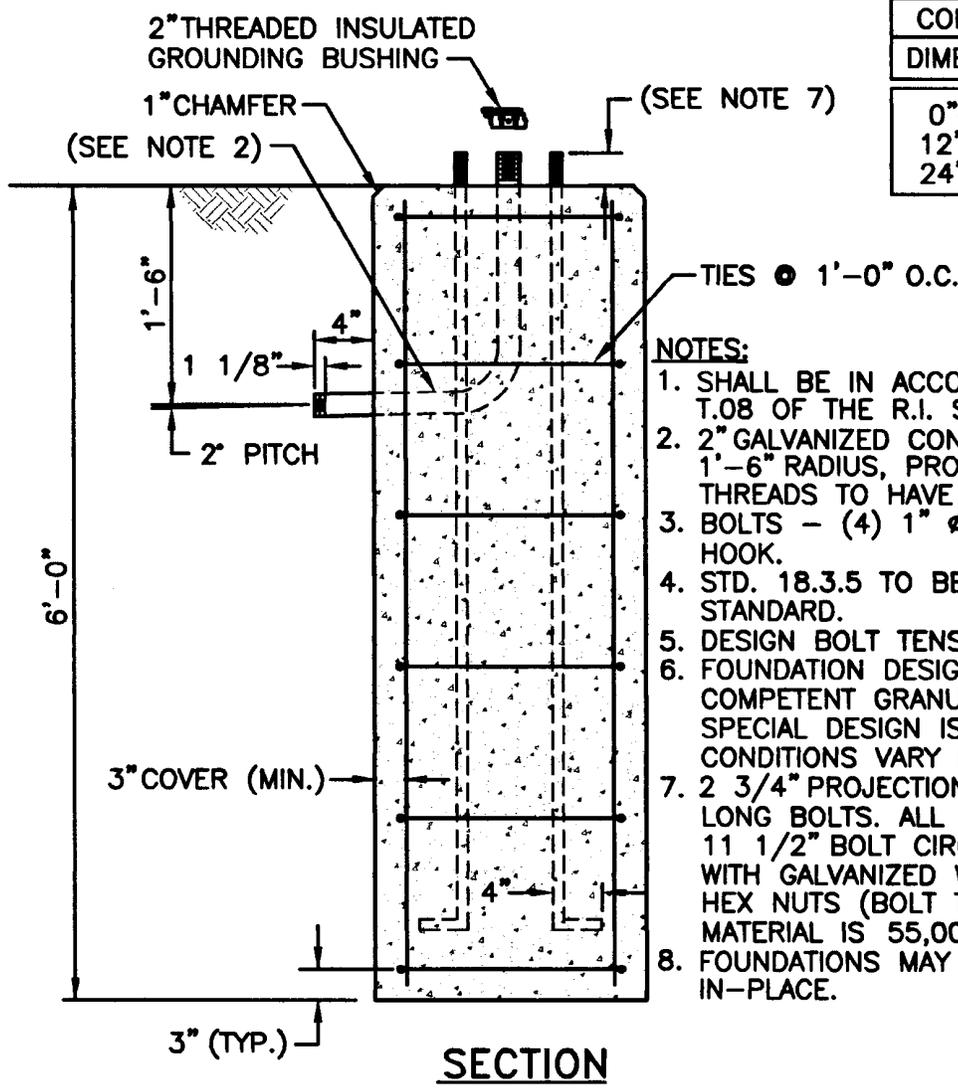
*Edmund J. Parker Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

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CONCRETE TOLERANCES	
DIMENSION	TOLERANCE
0"-12"	1/4"
12"-24"	1/2"
24"-72"	3/4"



- NOTES:**
1. SHALL BE IN ACCORDANCE WITH SECTION T.08 OF THE R.I. STANDARD SPECIFICATIONS.
  2. 2" GALVANIZED CONDUIT WITH 92° BEND AND 1'-6" RADIUS, PROJECTING 2 3/4" AS SHOWN. THREADS TO HAVE PROTECTOR.
  3. BOLTS - (4) 1"  $\phi$  x 5'-6" LONG WITH 4" HOOK.
  4. STD. 18.3.5 TO BE USED WITH THIS STANDARD.
  5. DESIGN BOLT TENSION = 30 K.
  6. FOUNDATION DESIGN IS BASED ON COMPETENT GRANULAR SOIL CONDITIONS. A SPECIAL DESIGN IS REQUIRED IF FIELD CONDITIONS VARY FROM THIS.
  7. 2 3/4" PROJECTION OF (4) 1"  $\phi$  x 5'-6" LONG BOLTS. ALL GALVANIZED BOLTS ON A 11 1/2" BOLT CIRCLE SHALL BE SHIPPED WITH GALVANIZED WASHERS AND GALVANIZED HEX NUTS (BOLT THREAD IS 8NC). BOLT MATERIAL IS 55,000 PSI MIN. YIELD.
  8. FOUNDATIONS MAY BE PRECAST OR CAST IN-PLACE.

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CONCRETE LIGHT STANDARD BASE

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*James H. Capaldi*  
 CHIEF ENGINEER  
 TRANSPORTATION

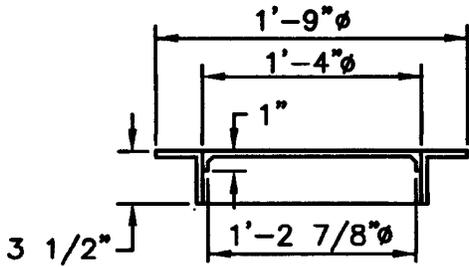
*Edmund J. Parker Jr.*  
 CHIEF DESIGN ENGINEER  
 TRANSPORTATION

JUNE 15, 1998  
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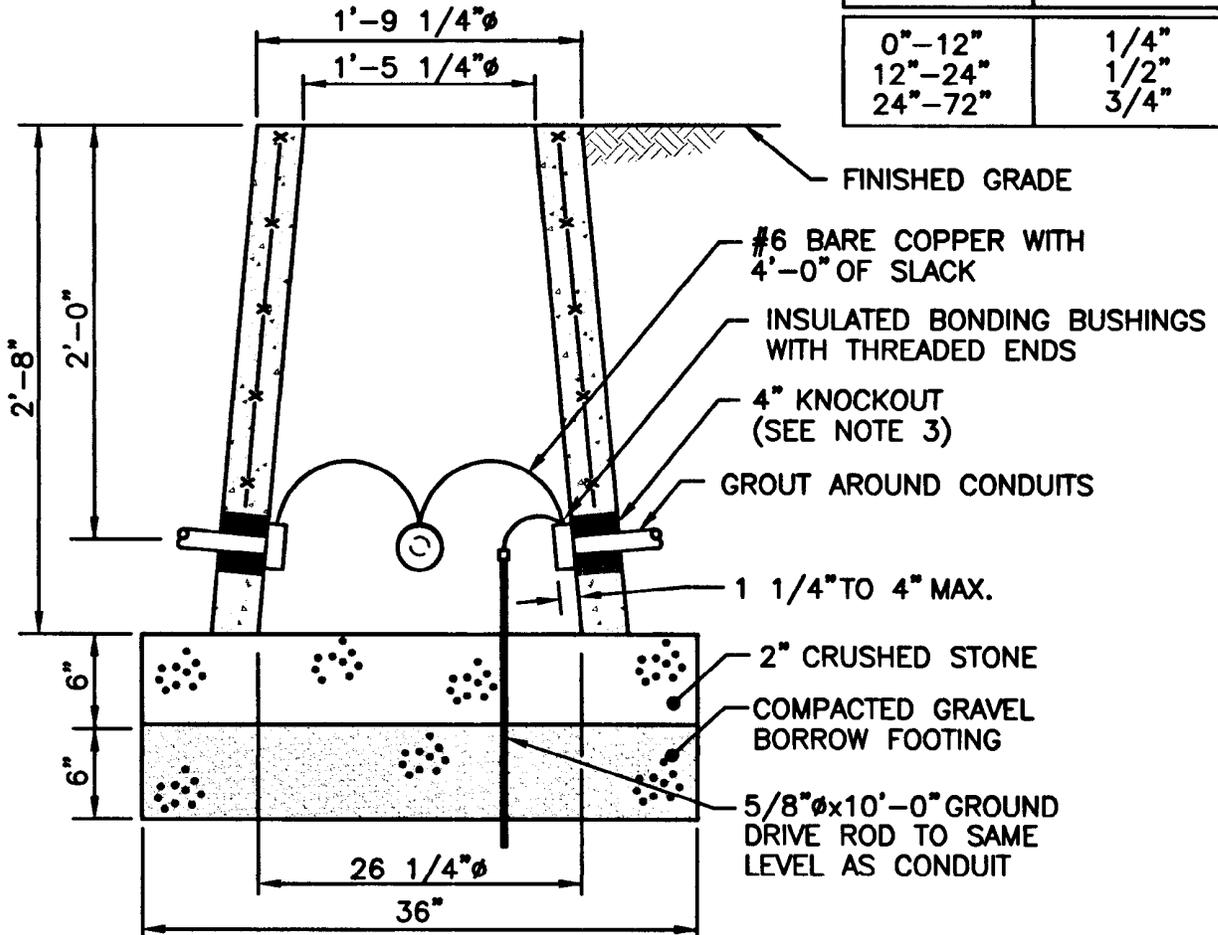
**NOTES:**

1. SHALL BE IN ACCORDANCE WITH SECTION T.05 OF THE R.I. STANDARD SPECIFICATIONS.
2. COVER TO HAVE DIAMOND SURFACE AND THE WORD "ELECTRIC" FOR ELECTRIC HANDHOLES, "SIGNAL" FOR SIGNAL HANDHOLES AND "COMM." FOR TELEPHONE HANDHOLES.
3. 4" KNOCKOUTS ARE TO BE PROVIDED ON ALL FOUR SIDES OF THE HANDHOLE. FOLLOWING CONDUIT INSTALLATION THE CONTRACTOR SHALL SEAL AROUND CONDUIT ENTRANCES WITH CEMENT.
4. MINIMUM REQUIRED CONCRETE REINFORCEMENT = 0.058 SQ. IN./LIN. FT. (EACH WAY).



**SECTION  
HANDHOLE RING AND COVER**

CONCRETE TOLERANCES	
DIMENSION	TOLERANCE
0"-12"	1/4"
12"-24"	1/2"
24"-72"	3/4"



**SECTION  
HANDHOLE TYPE "A"**

**RHODE ISLAND DEPARTMENT OF TRANSPORTATION**

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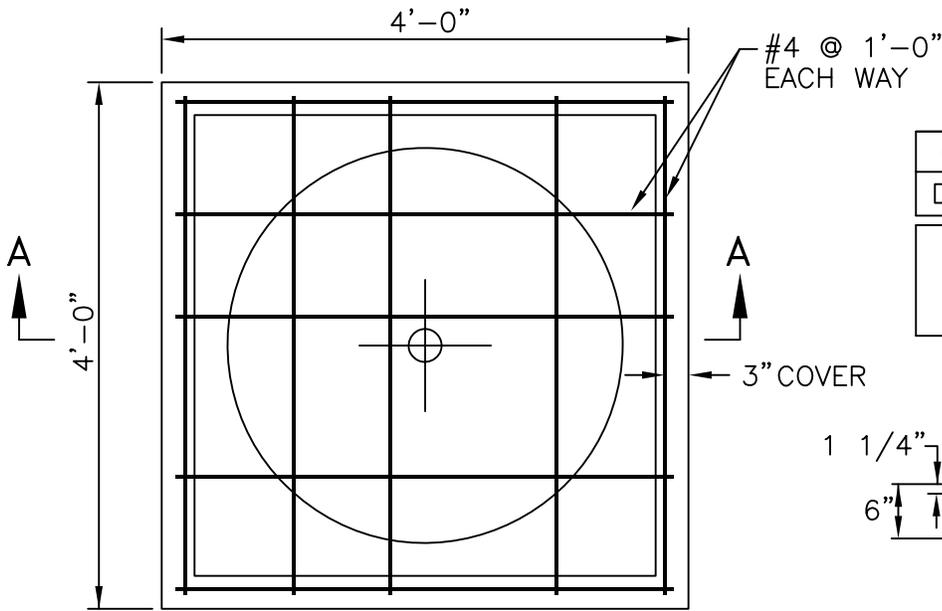
**PRECAST TYPE "A" HANDHOLE**

*Jean A. Caselli*  
CHIEF ENGINEER  
TRANSPORTATION

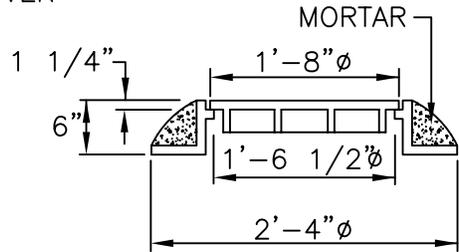
*Edmund Parker Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

JUNE 15, 1998  
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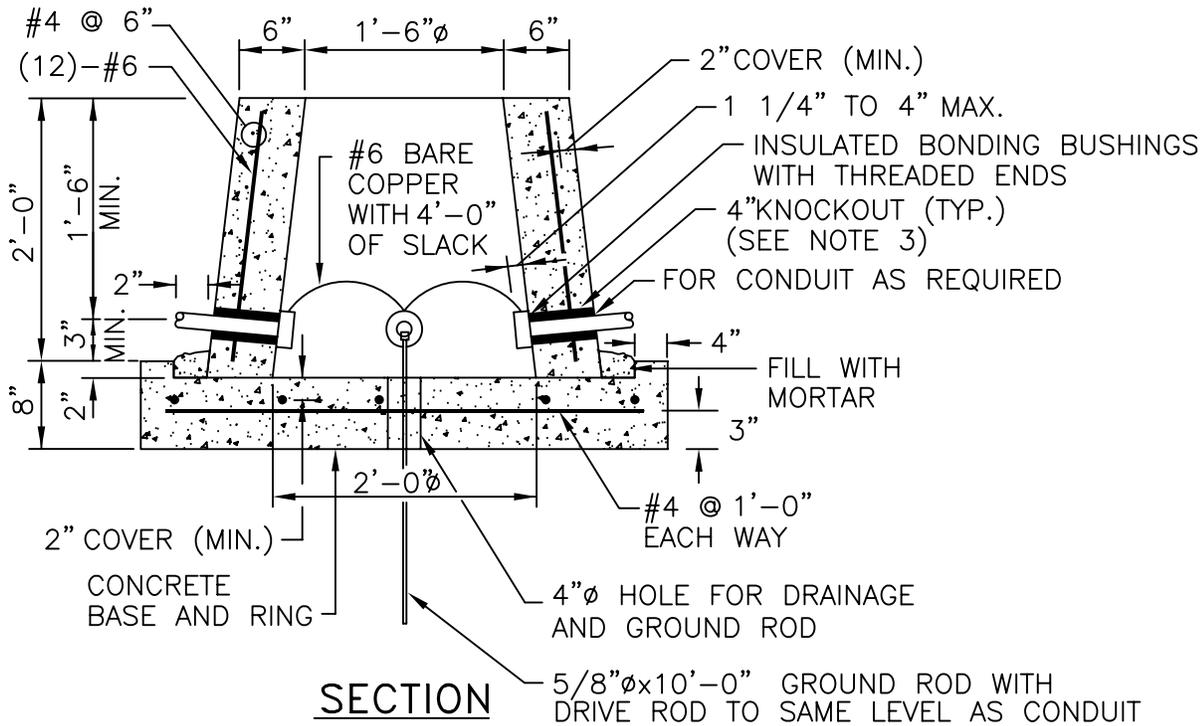


CONCRETE TOLERANCES	
DIMENSION	TOLERANCE
0"-12"	1/4"
12"-24"	1/2"
24"-72"	3/4"



**PLAN**

**FRAME AND COVER**



**SECTION**

**NOTES:**

1. SHALL BE IN ACCORDANCE WITH SECTION T.05 OF THE R.I. STANDARD SPECIFICATIONS.
2. COVER TO HAVE DIAMOND SURFACE AND THE WORD "ELECTRIC" ON ELECTRIC HANDHOLES, "SIGNAL" ON SIGNAL HANDHOLES, AND "COMM." ON TELEPHONE HANDHOLES.
3. 4" KNOCKOUTS ARE TO BE PROVIDED ON ALL FOUR SIDES OF THE HANDHOLE. FOLLOWING CONDUIT INSTALLATION THE CONTRACTOR SHALL SEAL AROUND THE CONDUIT ENTRANCES WITH CEMENT.

**RHODE ISLAND DEPARTMENT OF TRANSPORTATION**

REVISIONS		
NO.	BY	DATE
1	MLP	Mar 05

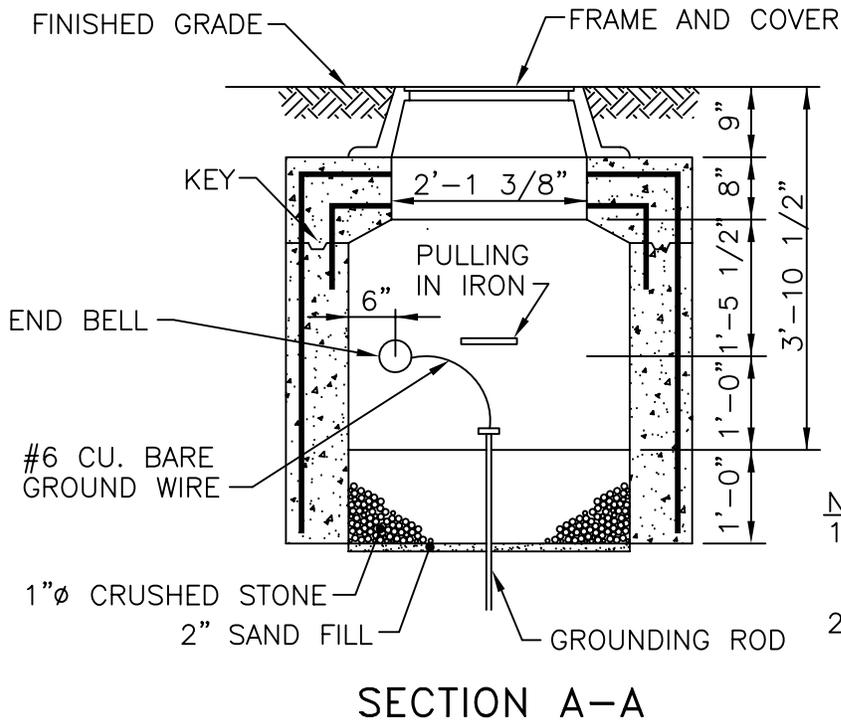
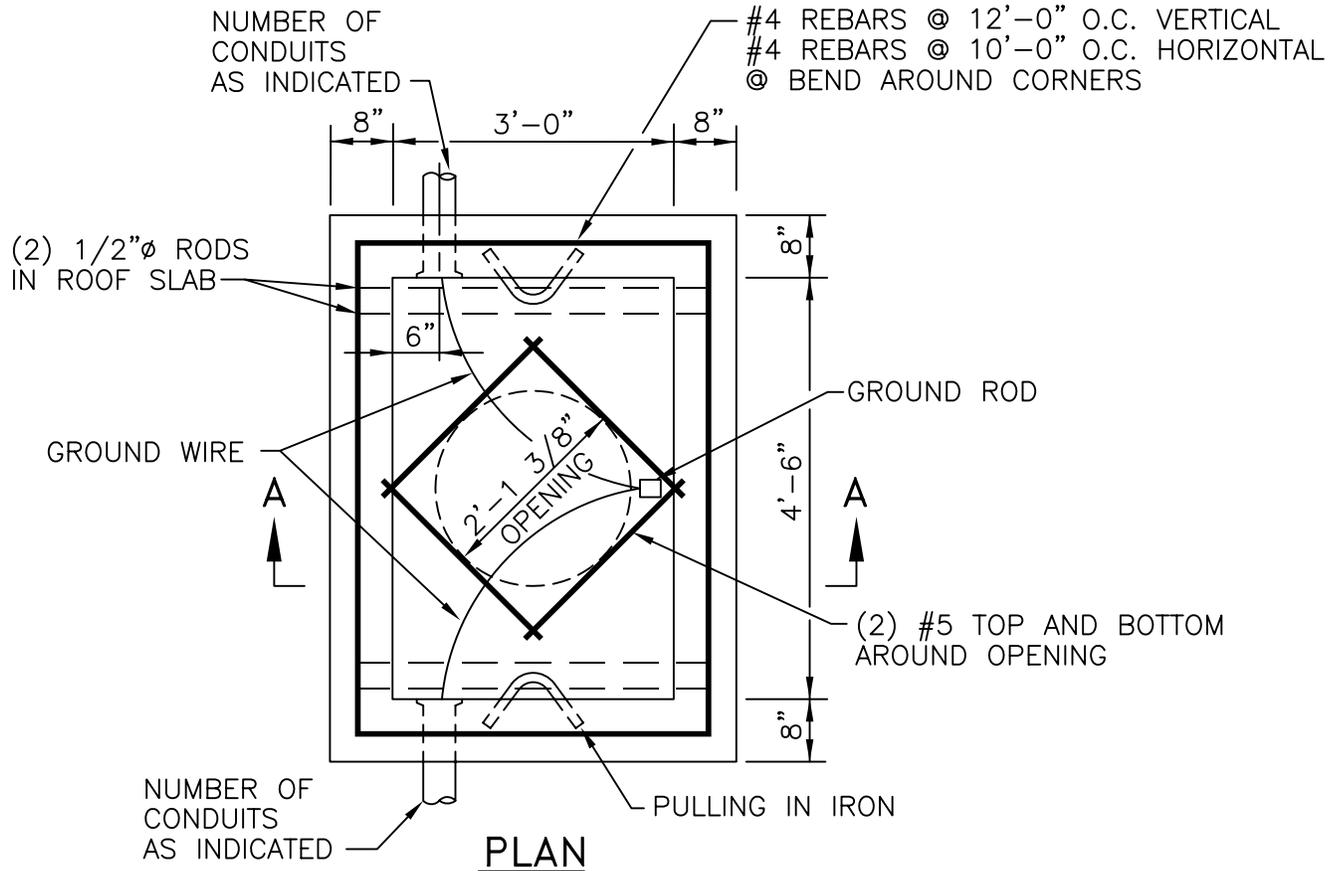
**PRECAST TYPE "H" HEAVY-DUTY HANDHOLE**

*James H. Casaldi*  
CHIEF ENGINEER  
TRANSPORTATION

*Edmund J. Parker Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

JUNE 15, 1998  
ISSUE DATE





**NOTES:**

1. SHALL BE IN ACCORDANCE WITH SECTION T.05 OF THE R.I. STANDRAD SPECIFICATIONS.
2. COVER TO HAVE DIAMOND SURFACE AND THE WORD "ELECTRIC."

**RHODE ISLAND DEPARTMENT OF TRANSPORTATION**

**PRECAST TYPE "B" PULLBOX**

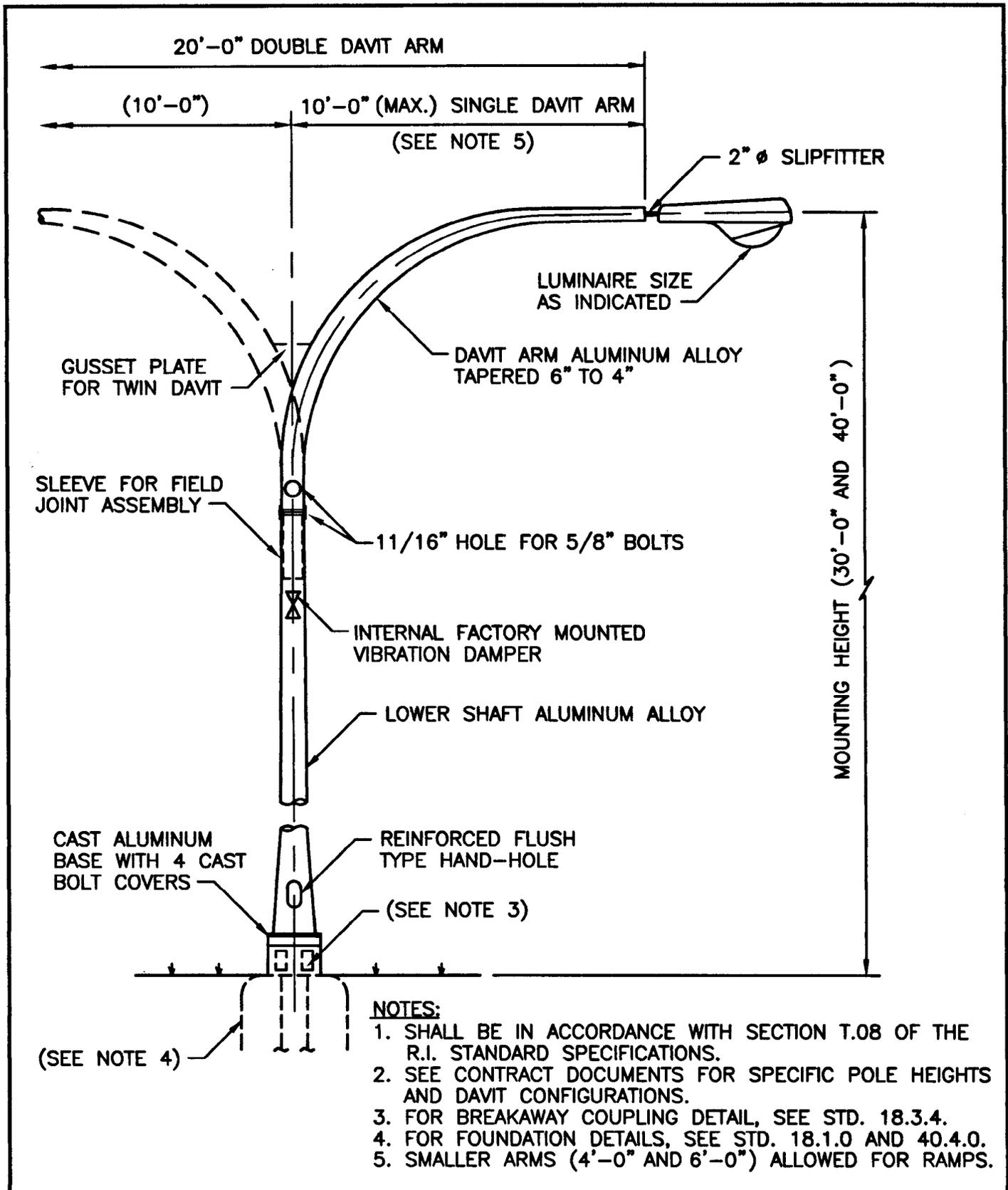
REVISIONS		
NO.	BY	DATE
1	MLP	Mar 05

*James A. Casaldi*  
CHIEF ENGINEER  
TRANSPORTATION

*Edmund J. Parker Jr.*  
CHIEF DESIGN ENGINEER  
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RHODE ISLAND DEPARTMENT OF TRANSPORTATION

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NO.	BY	DATE

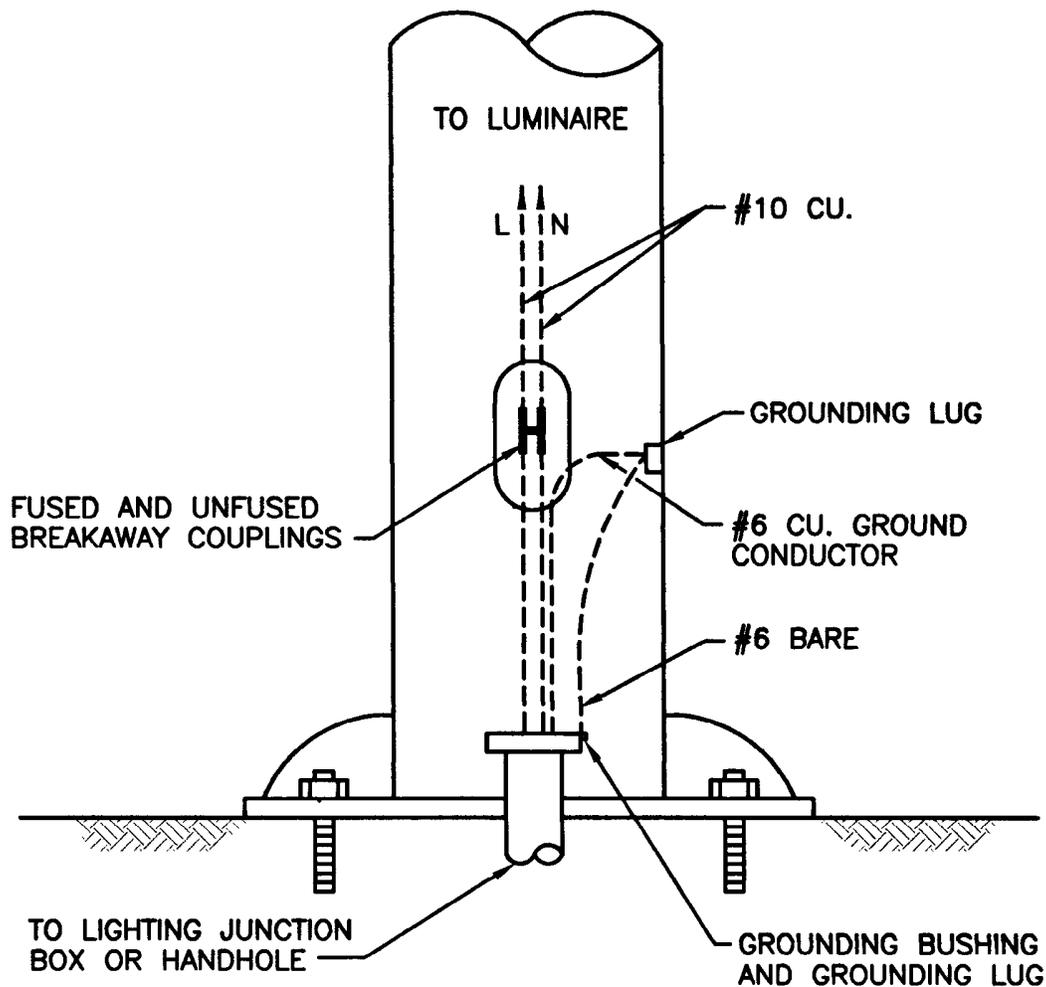
ALUMINUM LIGHTING STANDARDS

*James A. Casella*  
 CHIEF ENGINEER  
 TRANSPORTATION

*Edmund J. Parker Jr.*  
 CHIEF DESIGN ENGINEER  
 TRANSPORTATION

JUNE 15, 1998  
 ISSUE DATE





**NOTE:**  
SHALL BE IN ACCORDANCE WITH SECTION T.04 OF THE R.I. STANDARD SPECIFICATIONS.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE

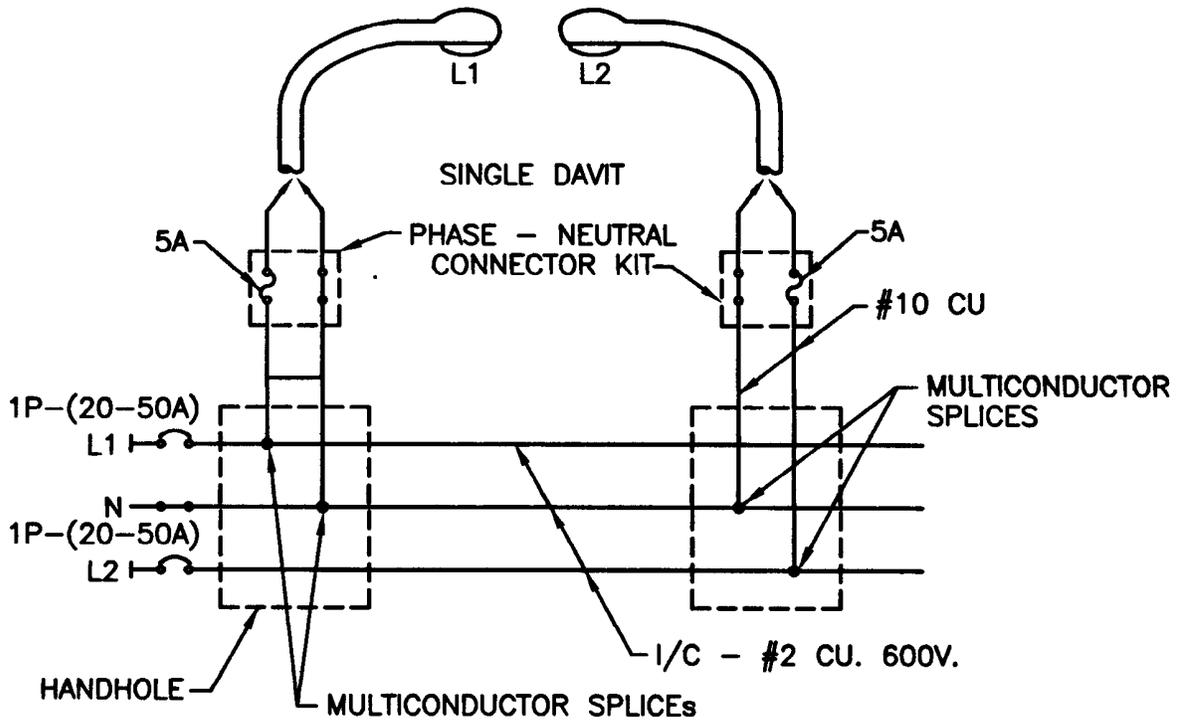
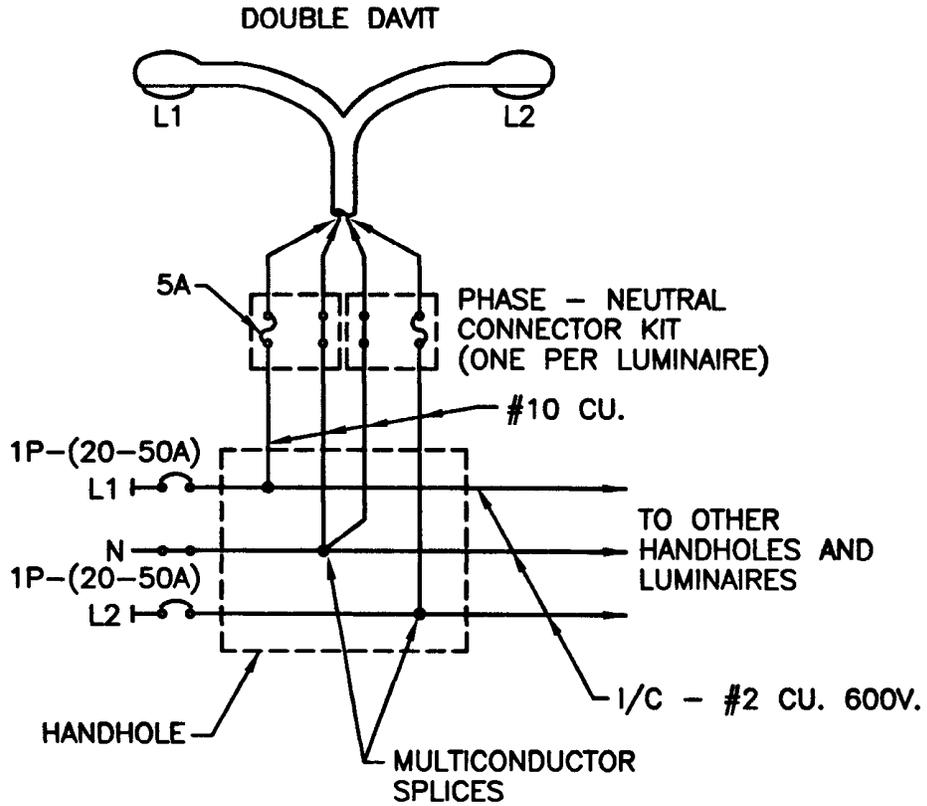
ALUMINUM POLE – GROUNDING DETAIL

*James A. Capaldi*  
CHIEF ENGINEER  
TRANSPORTATION

*Edmund J. Parker Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

JUNE 15, 1998  
ISSUE DATE





**NOTE:**  
SHALL BE IN ACCORDANCE WITH SECTION T.04 OF THE R.I. STANDARD SPECIFICATIONS.

**RHODE ISLAND DEPARTMENT OF TRANSPORTATION**

REVISIONS		
NO.	BY	DATE

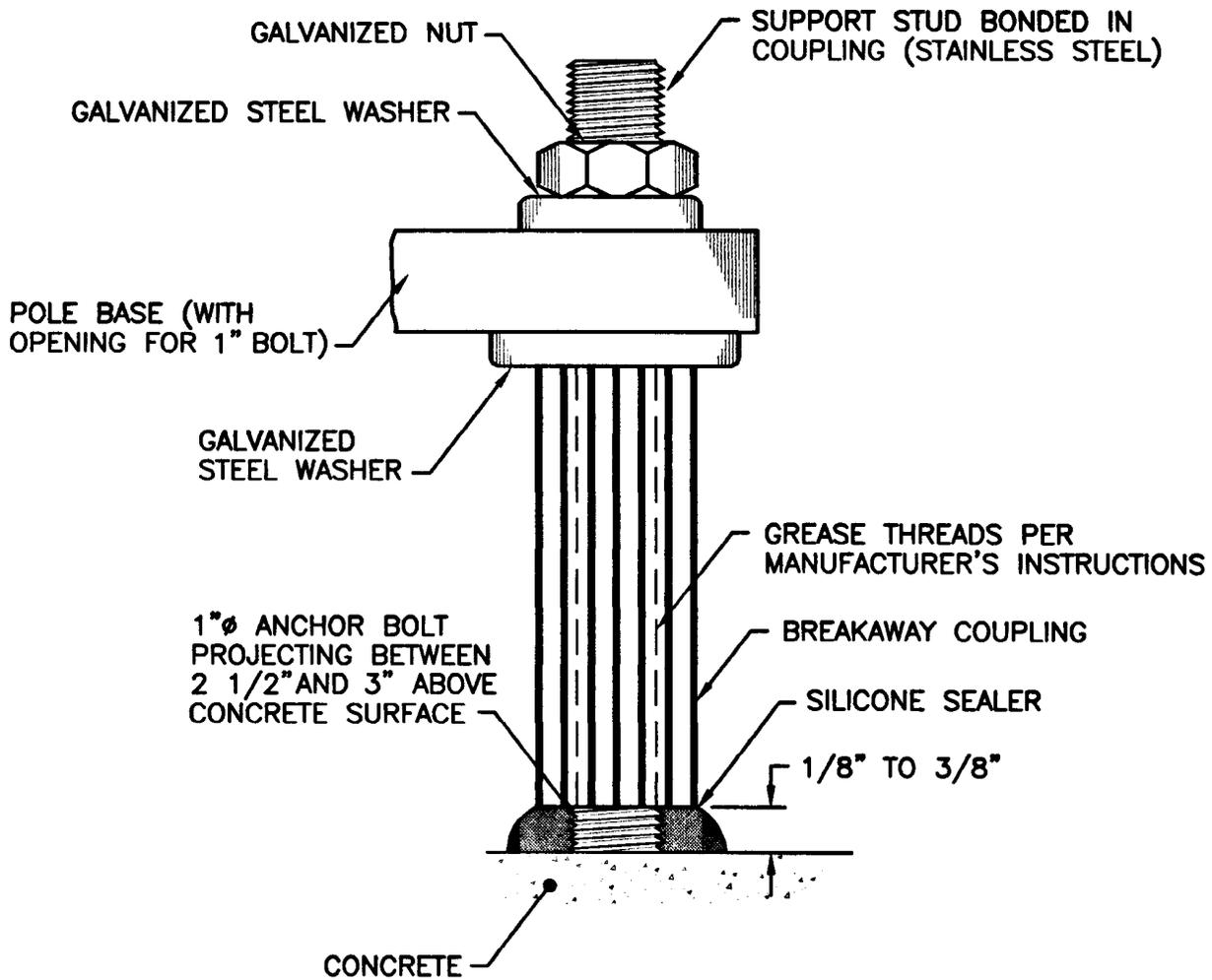
**TYPICAL LUMINAIRE - WIRING DIAGRAM**

*James A. Casella*  
CHIEF ENGINEER  
TRANSPORTATION

*Edmund J. Parker Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

JUNE 15, 1998  
ISSUE DATE





**NOTES:**

1. SHALL BE IN ACCORDANCE WITH SECTION T.08 OF THE R.I. STANDARD SPECIFICATIONS.
2. STD. 18.3.5 TO BE USED WITH THIS STANDARD.

**RHODE ISLAND DEPARTMENT OF TRANSPORTATION**

**BREAKAWAY SUPPORT COUPLINGS  
FOR LIGHT STANDARDS**

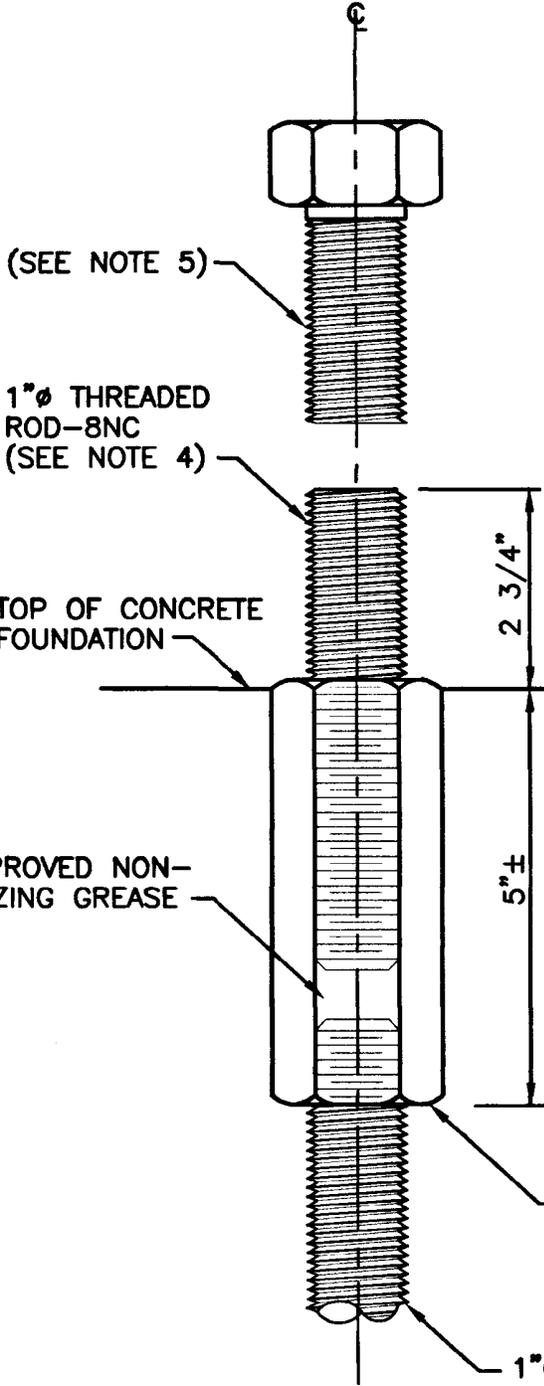
REVISIONS		
NO.	BY	DATE

*Juan A. Casali*  
CHIEF ENGINEER  
TRANSPORTATION

*Edmund J. Parker Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

JUNE 15, 1998  
ISSUE DATE





**NOTES:**

1. SHALL BE IN ACCORDANCE WITH SECTION T.08 OF THE R.I. STANDARD SPECIFICATIONS.
2. THIS STANDARD SHALL BE COORDINATED WITH STD. 18.1.0 AND 18.3.4.
3. THE HEXAGONAL COUPLINGS SHALL BE GALVANIZED AND SHALL BE ABLE TO DEVELOP THE STRENGTH OF THE 1"  $\phi$  ANCHOR BOLTS. THE BOLT LENGTH SHALL BE DETERMINED BY THE BOLT SUPPLIER AND SHALL MEET THE APPROVAL OF THE ENGINEER.
4. THE 1"  $\phi$  STAINLESS STEEL THREADED RODS SHALL BE USED WHEN STD. 18.3.4 BREAKAWAY COUPLINGS ARE SPECIFIED. THEY SHALL BE ABLE TO DEVELOP THE STRENGTH OF THE 1"  $\phi$  ANCHOR BOLTS. THEY SHALL BE BONDED TO THE STD. 18.3.4 COUPLINGS WITH A BONDING MATERIAL APPROVED BY THE BREAKAWAY COUPLING MANUFACTURER.
5. WHEN STD. 18.3.4 COUPLINGS ARE NOT SPECIFIED, GALVANIZED OR STAINLESS STEEL HEX BOLTS SHALL BE USED INSTEAD OF THREADED RODS. THEY SHALL BE ABLE TO DEVELOP THE STRENGTH OF THE 1"  $\phi$  ANCHOR BOLTS.
6. APPROVED PLUGS SHALL BE INSERTED INTO THE HEX COUPLINGS DURING CONSTRUCTION OF THE FOUNDATION.

1"  $\phi$  GALVANIZED HEX COUPLING  
(SEE NOTE 3)

1"  $\phi$  GALVANIZED ANCHOR BOLTS, 5'-6" LONG,  
55,000 PSI. MINIMUM YIELD, 8NC BOLT THREADS.

**RHODE ISLAND DEPARTMENT OF TRANSPORTATION**

**RECESSED BOLT COUPLINGS  
FOR LIGHT STANDARDS**

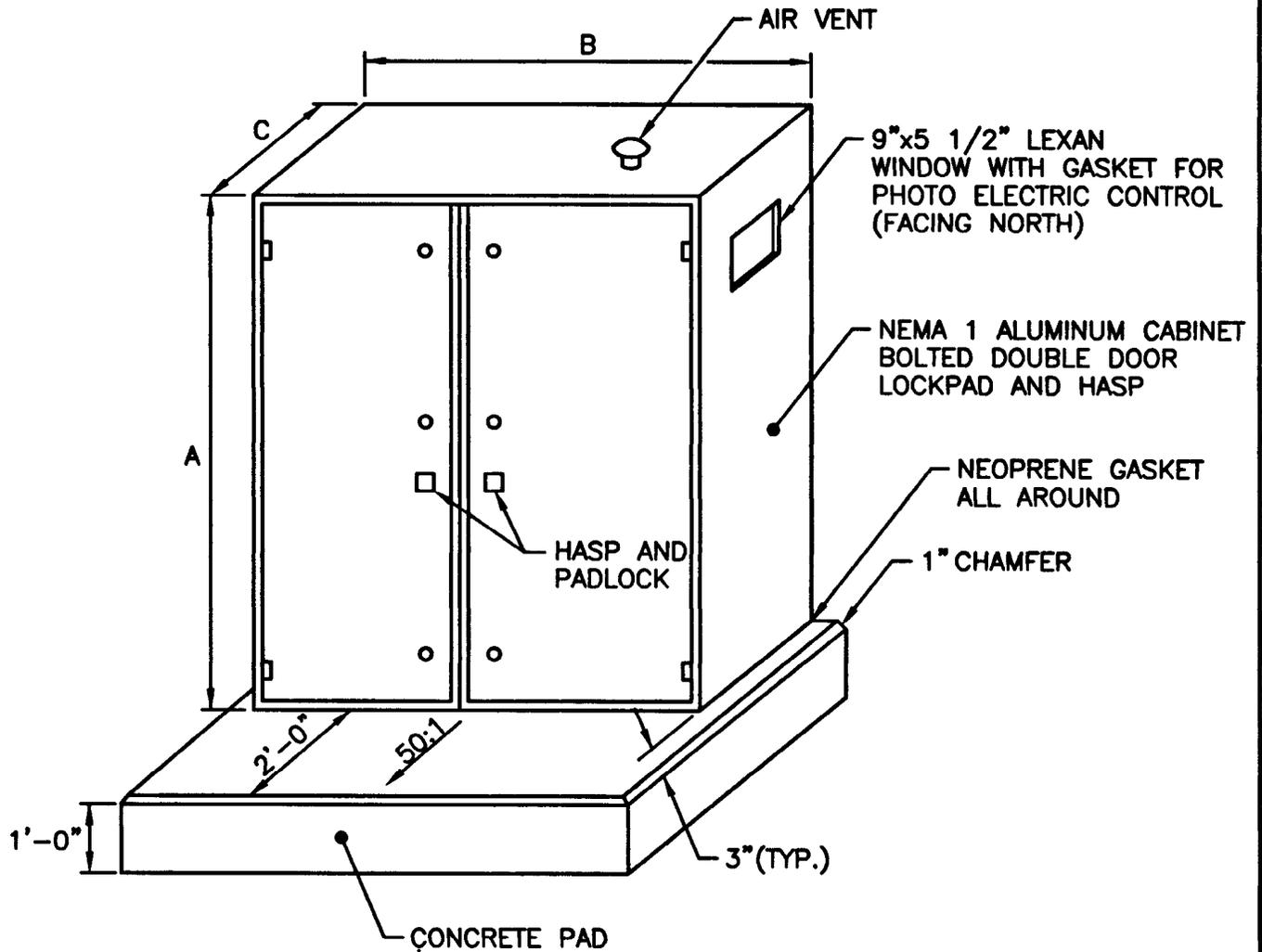
REVISIONS		
NO.	BY	DATE

*James H. Casabelli*  
CHIEF ENGINEER  
TRANSPORTATION

*Edmund Parker Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

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CABINET DIMENSIONS	A	B	C
120/240 OR 120/208 VOLT	4'-0" TO 4'-4"	3'-6" TO 4'-2"	1'-2" TO 2'-0"
240/480 VOLT	4'-0" TO 6'-0"	3'-6" TO 5'-0"	2'-0"

**NOTES:**

1. SHALL BE IN ACCORDANCE WITH SECTION T.09 OF THE R.I. STANDARD SPECIFICATIONS.
2. PEDESTAL SHOULD BE LOCATED A MINIMUM OF 30'-0" FROM EDGE OF TRAVEL LANE OR BEHIND A BARRIER OR GUARDRAIL IF LESS THAN 30'-0".

**RHODE ISLAND DEPARTMENT OF TRANSPORTATION**

REVISIONS		
NO.	BY	DATE

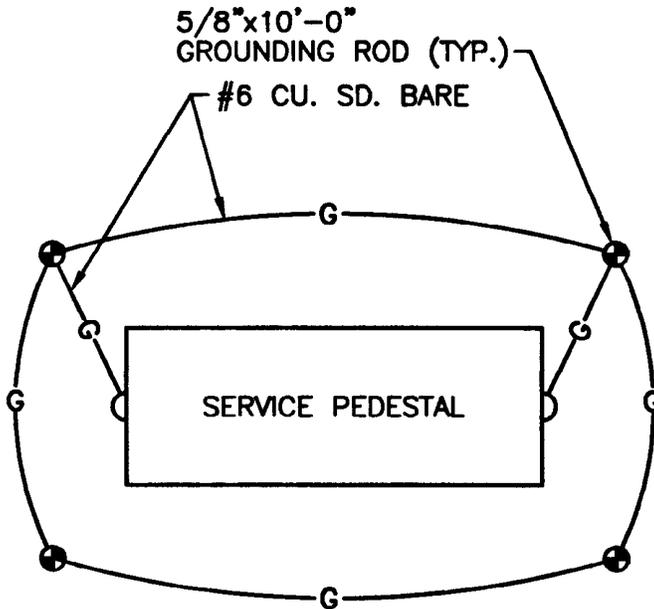
**SERVICE PEDESTAL**

*James A. Capaldi*  
 CHIEF ENGINEER  
 TRANSPORTATION

*Edmund Parker Jr*  
 CHIEF DESIGN ENGINEER  
 TRANSPORTATION

JUNE 15, 1998  
 ISSUE DATE





**NOTES:**

1. SHALL BE IN ACCORDANCE WITH SECTION T.04 OF THE R.I. STANDARD SPECIFICATIONS.
2. #6 CU. BARE GROUND WIRE 1'-0" BELOW GRADE. ALLOW 3'-0" SLACK LEADS TO BOND AT GROUNDING LUGS IN CABINET.

**RHODE ISLAND DEPARTMENT OF TRANSPORTATION**

REVISIONS		
NO.	BY	DATE

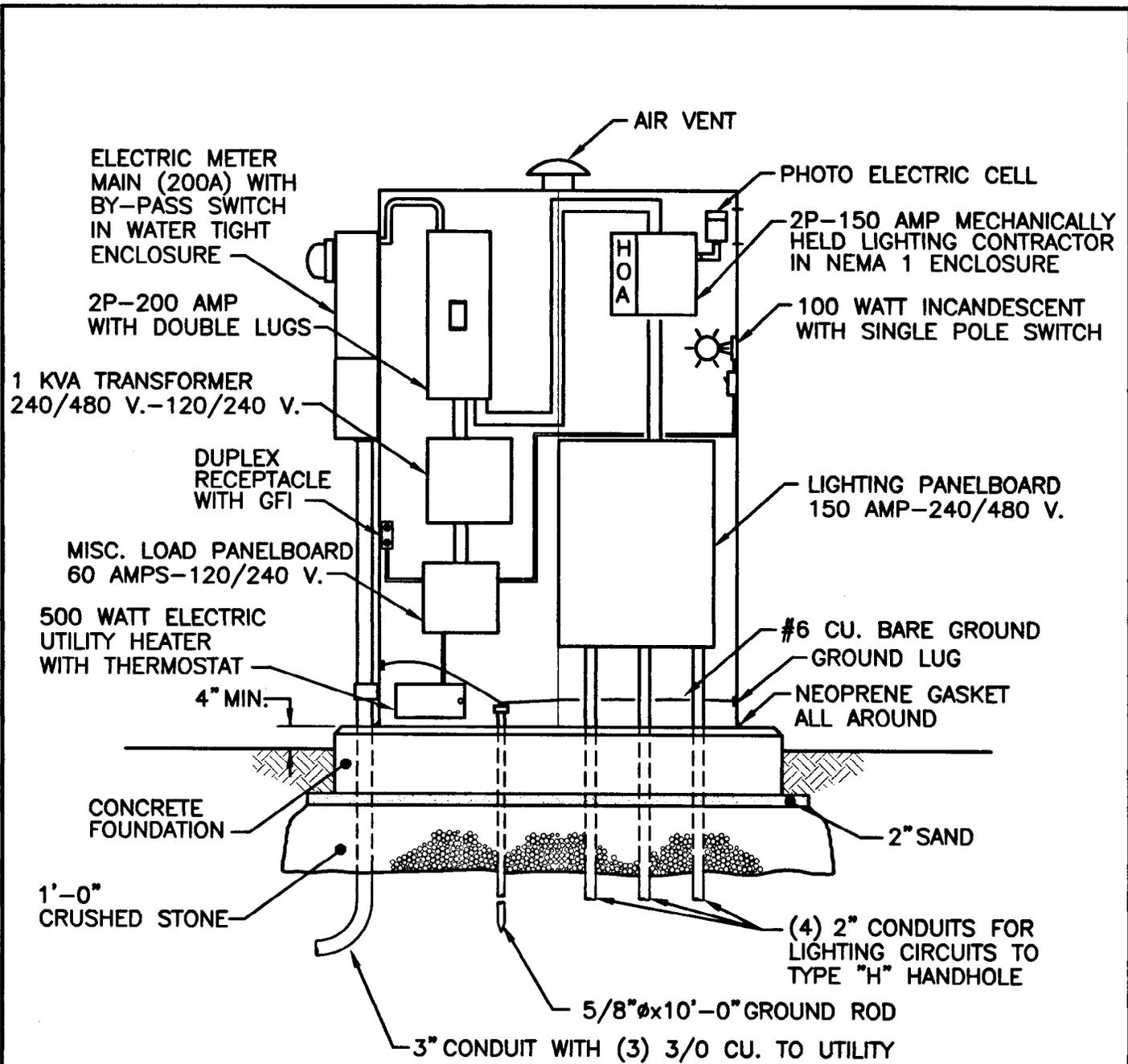
**SERVICE PEDESTAL – GROUNDING DETAIL**

*James H. Casabelli*  
 CHIEF ENGINEER  
 TRANSPORTATION

*Edmund J. Parker Jr.*  
 CHIEF DESIGN ENGINEER  
 TRANSPORTATION

JUNE 15, 1998  
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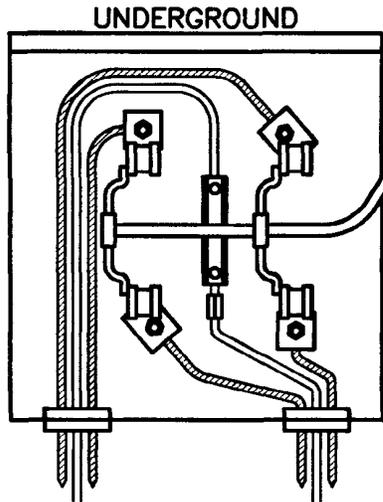


**SWITCHGEAR DETAIL  
FRONT VIEW**

- NOTE:**
1. SHALL BE IN ACCORDANCE WITH SECTION T.09 OF THE R.I. STANDARD SPECIFICATIONS.
  2. APPROXIMATE DIMENSION 6'-0" (MAX.) x 4'-0" x 1'-6" TO 2'-0" (MAX.)

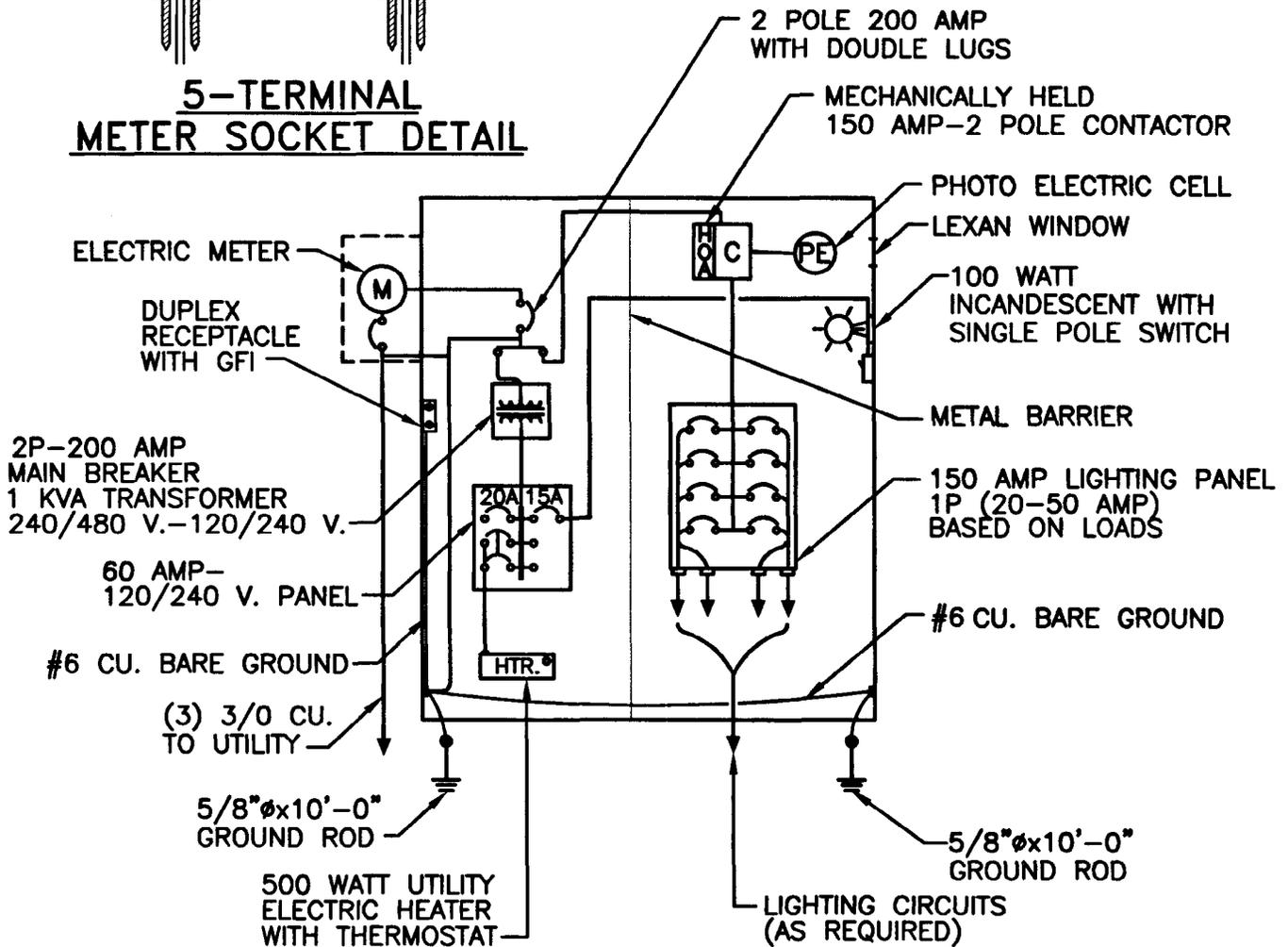
**RHODE ISLAND DEPARTMENT OF TRANSPORTATION**

REVISIONS			<p align="center"><b>SERVICE PEDESTAL 240/480 VOLTS - 3W</b></p>	
NO.	BY	DATE		
			<p><i>James A. Casabelli</i> CHIEF ENGINEER TRANSPORTATION</p>	<p><i>Edmund Parker Jr.</i> CHIEF DESIGN ENGINEER TRANSPORTATION</p>



BYPASS LEVER IN BYPASSING POSITION

**5-TERMINAL METER SOCKET DETAIL**



**POWER SCHEMATIC**

**NOTES:**

1. SHALL BE IN ACCORDANCE WITH SECTION T.09 OF THE R.I. STANDARD SPECIFICATIONS.
2. ON THREE-WIRE INSTALLATIONS, TERMINAL AND JAW AT "B" MUST BE GROUNDING.

**RHODE ISLAND DEPARTMENT OF TRANSPORTATION**

REVISIONS		
NO.	BY	DATE

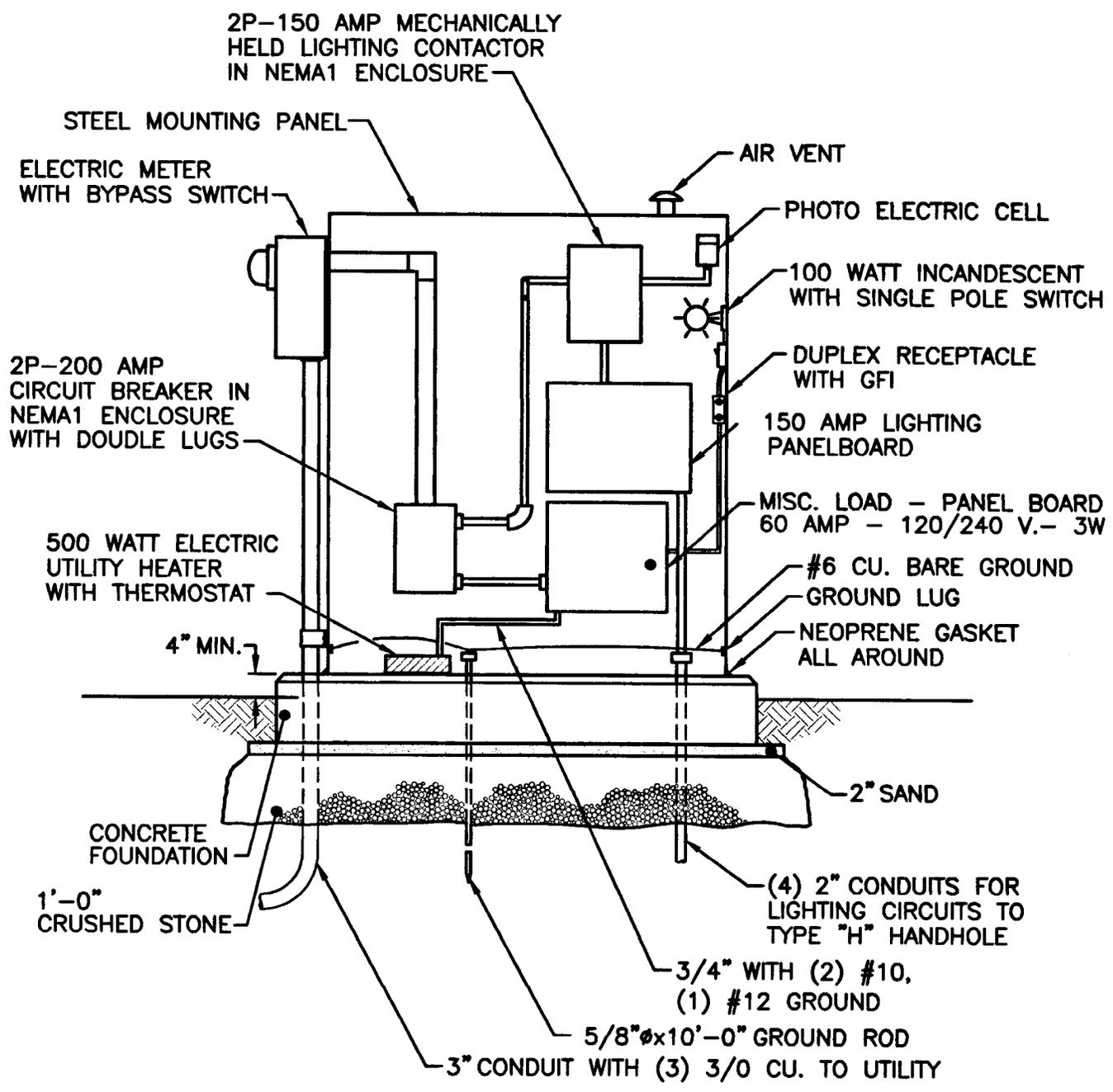
**SERVICE PEDESTAL  
240/480 VOLTS - 3W**

*James A. Capaldi*  
CHIEF ENGINEER  
TRANSPORTATION

*Edmund J. Parker, Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

JUNE 15, 1998  
ISSUE DATE





**SWITCHGEAR DETAIL  
FRONT VIEW**

**NOTES:**  
SHALL BE IN ACCORDANCE WITH SECTION T.09 OF THE R.I. STANDARD SPECIFICATIONS.

**RHODE ISLAND DEPARTMENT OF TRANSPORTATION**

REVISIONS		
NO.	BY	DATE

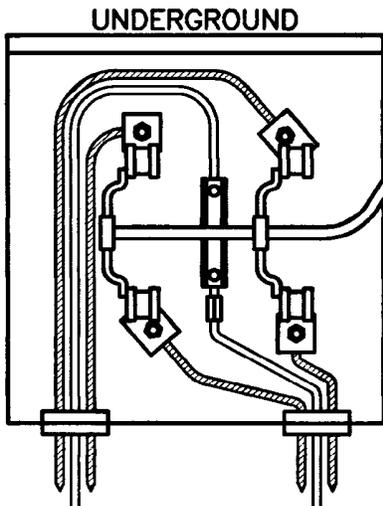
**SERVICE PEDESTAL  
120/240 OR 120/208 VOLTS - 3W**

*Juan A. Capaldi*  
CHIEF ENGINEER  
TRANSPORTATION

*Edmund J. Parker Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

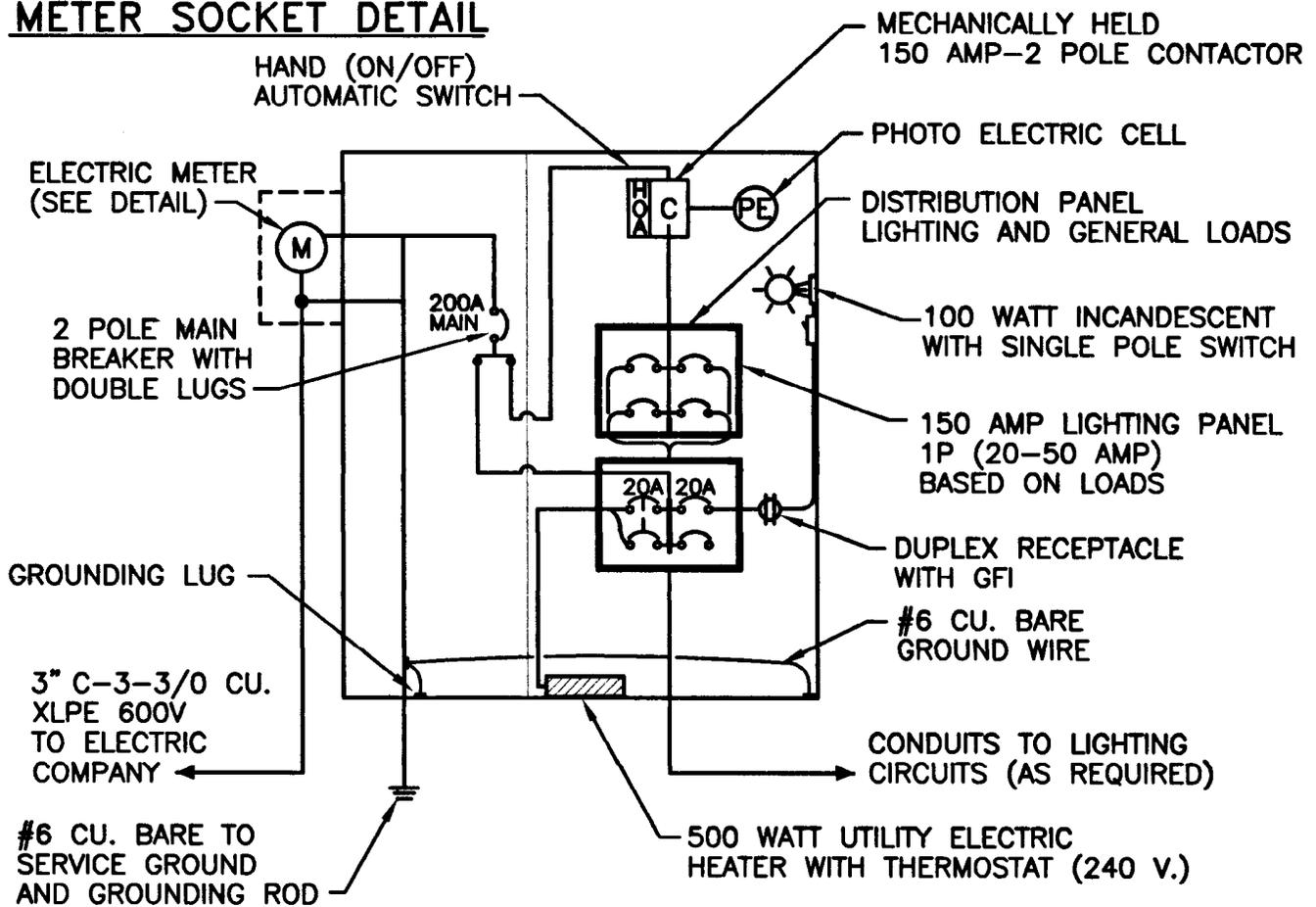
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BYPASS LEVER IN BYPASSING POSITION

**5-TERMINAL  
METER SOCKET DETAIL**



**POWER SCHEMATIC**

**NOTES:**

1. SHALL BE IN ACCORDANCE WITH SECTION T.09 OF THE R.I. STANDARD SPECIFICATIONS.
2. ON THREE-WIRE INSTALLATIONS, TERMINAL AND JAW AT "B" MUST BE GROUNDED.

**RHODE ISLAND DEPARTMENT OF TRANSPORTATION**

REVISIONS		
NO.	BY	DATE

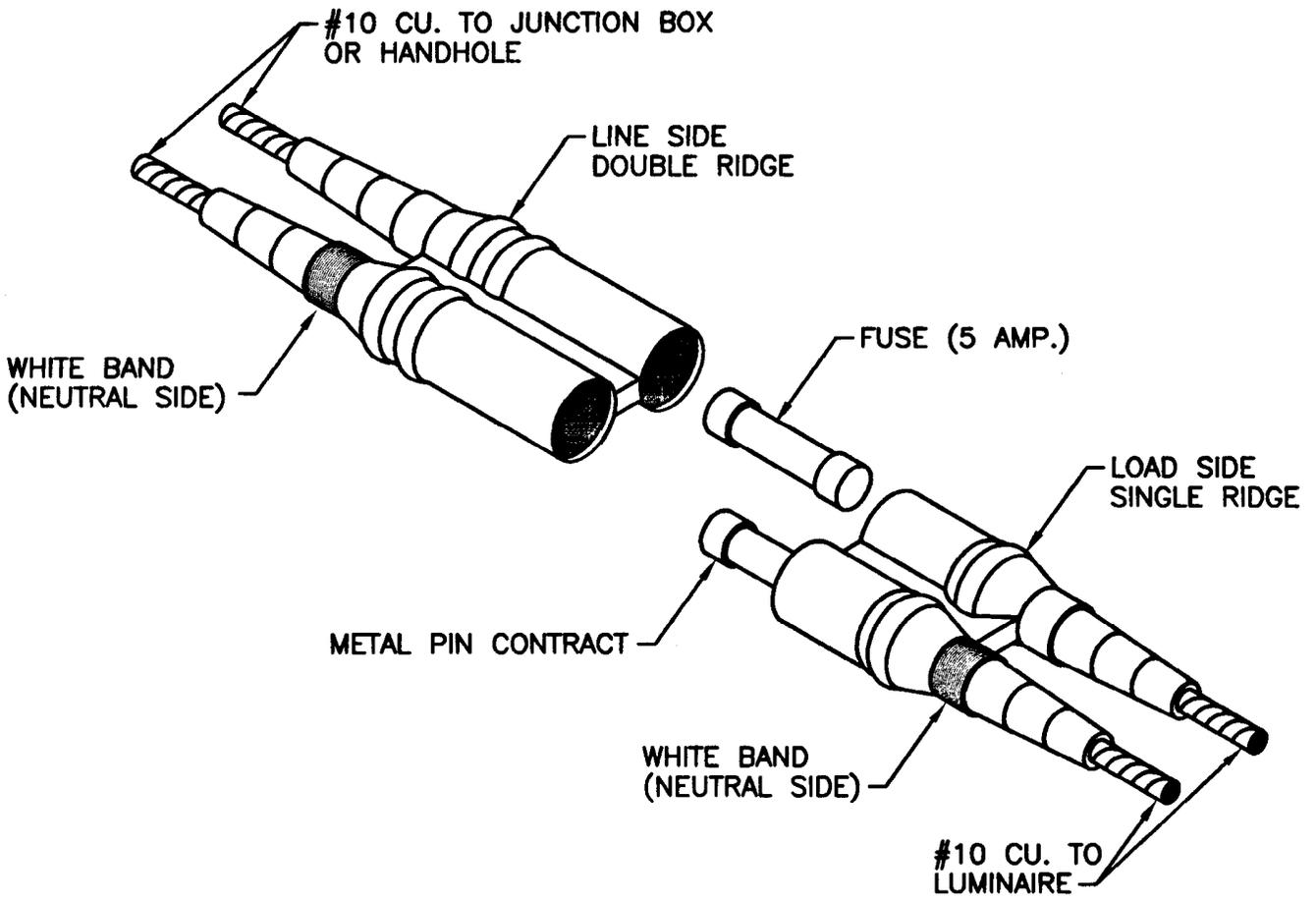
**SERVICE PEDESTAL  
120/240 OR 120/208 VOLTS - 3W**

*James A. Capaldi*  
CHIEF ENGINEER  
TRANSPORTATION

*Edmund J. Parker Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

JUNE 15, 1998  
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- NOTES:**
1. SHALL BE IN ACCORDANCE WITH SECTON T.04 OF THE R.I. STANDARD SPECIFICATIONS.
  2. LOCATED IN HANDHOLE AT BASE OF ALUMINUM POLE.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE

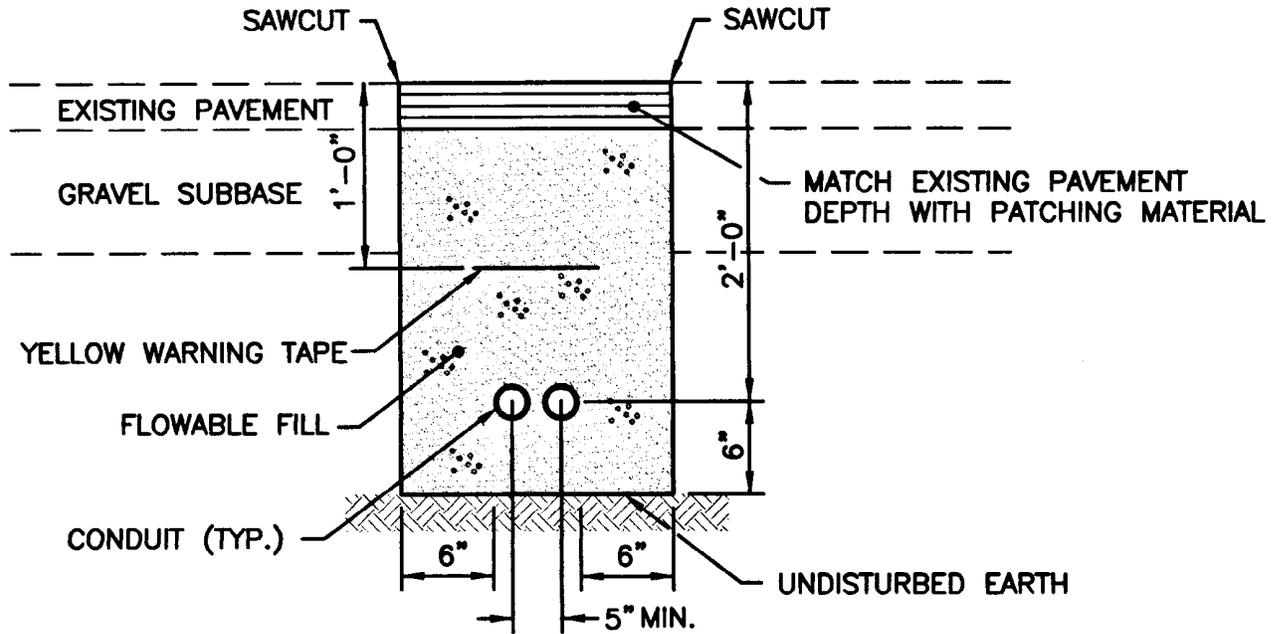
PHASE-NEUTRAL CONNECTOR KIT

*James A. Casabelli*  
 CHIEF ENGINEER  
 TRANSPORTATION

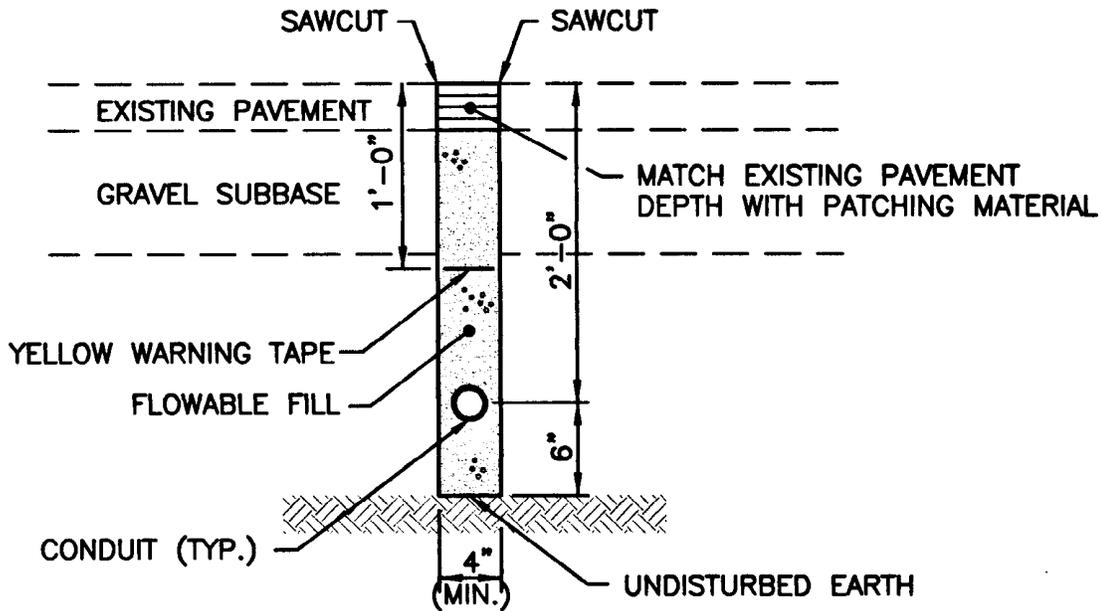
*Edmund Parker Jr.*  
 CHIEF DESIGN ENGINEER  
 TRANSPORTATION

JUNE 15, 1998  
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**STANDARD TRENCH DETAIL**



**AUTOMATIC TRENCHING MACHINE DETAIL**

**NOTE:**  
SHALL BE IN ACCORDANCE WITH SECTION T.06 OF THE R.I. STANDARD SPECIFICATIONS.

**RHODE ISLAND DEPARTMENT OF TRANSPORTATION**

REVISIONS		
NO.	BY	DATE

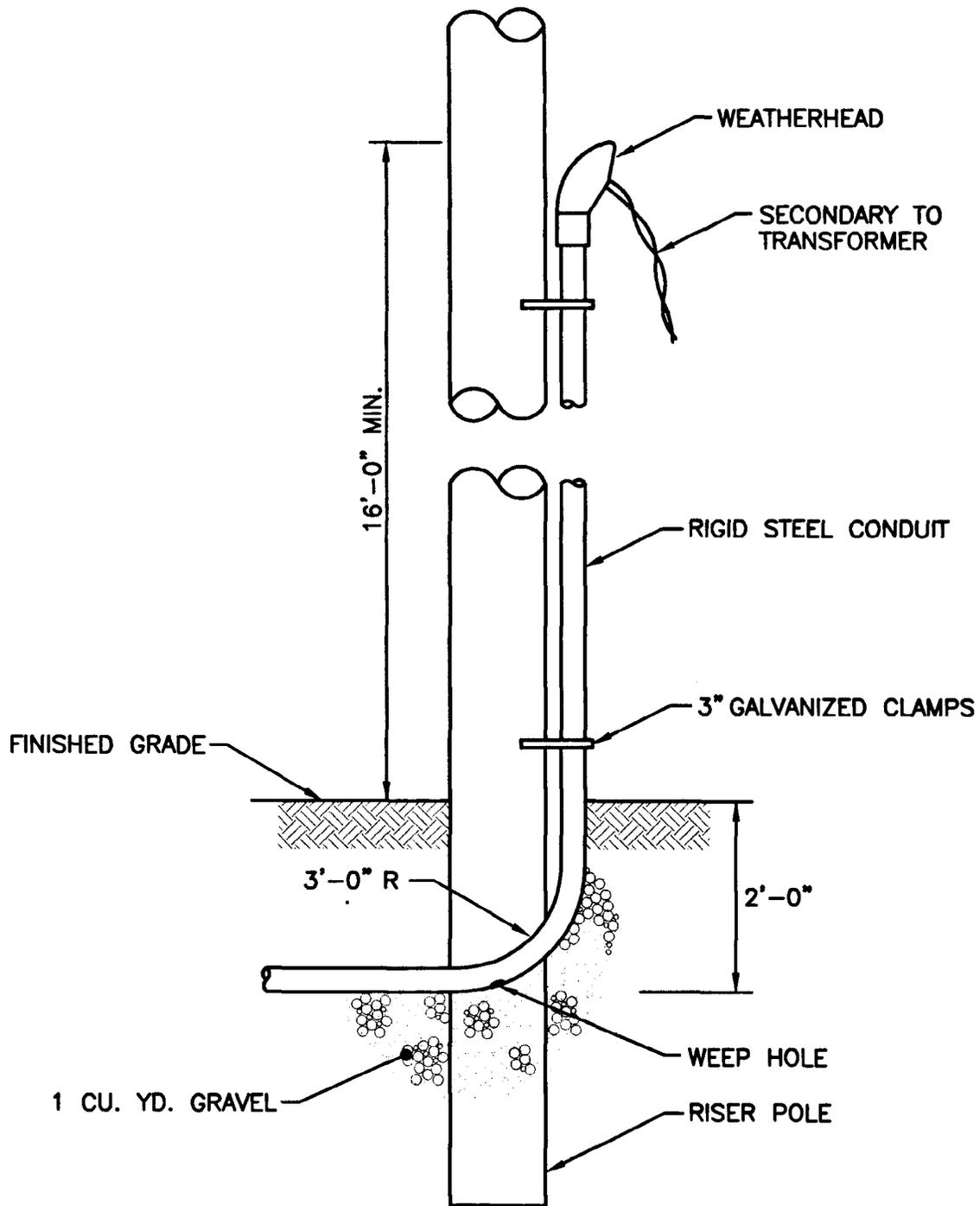
**TRENCH DETAIL FOR  
CONDUIT IN EXISTING ROADWAY**

*James H. Casaldi*  
CHIEF ENGINEER  
TRANSPORTATION

*Edmund J. Parker Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

JUNE 15, 1998  
ISSUE DATE





**NOTE:**  
SHALL BE IN ACCORDANCE WITH SECTION T.06 OF THE R.I. STANDARD SPECIFICATIONS.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

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NO.	BY	DATE

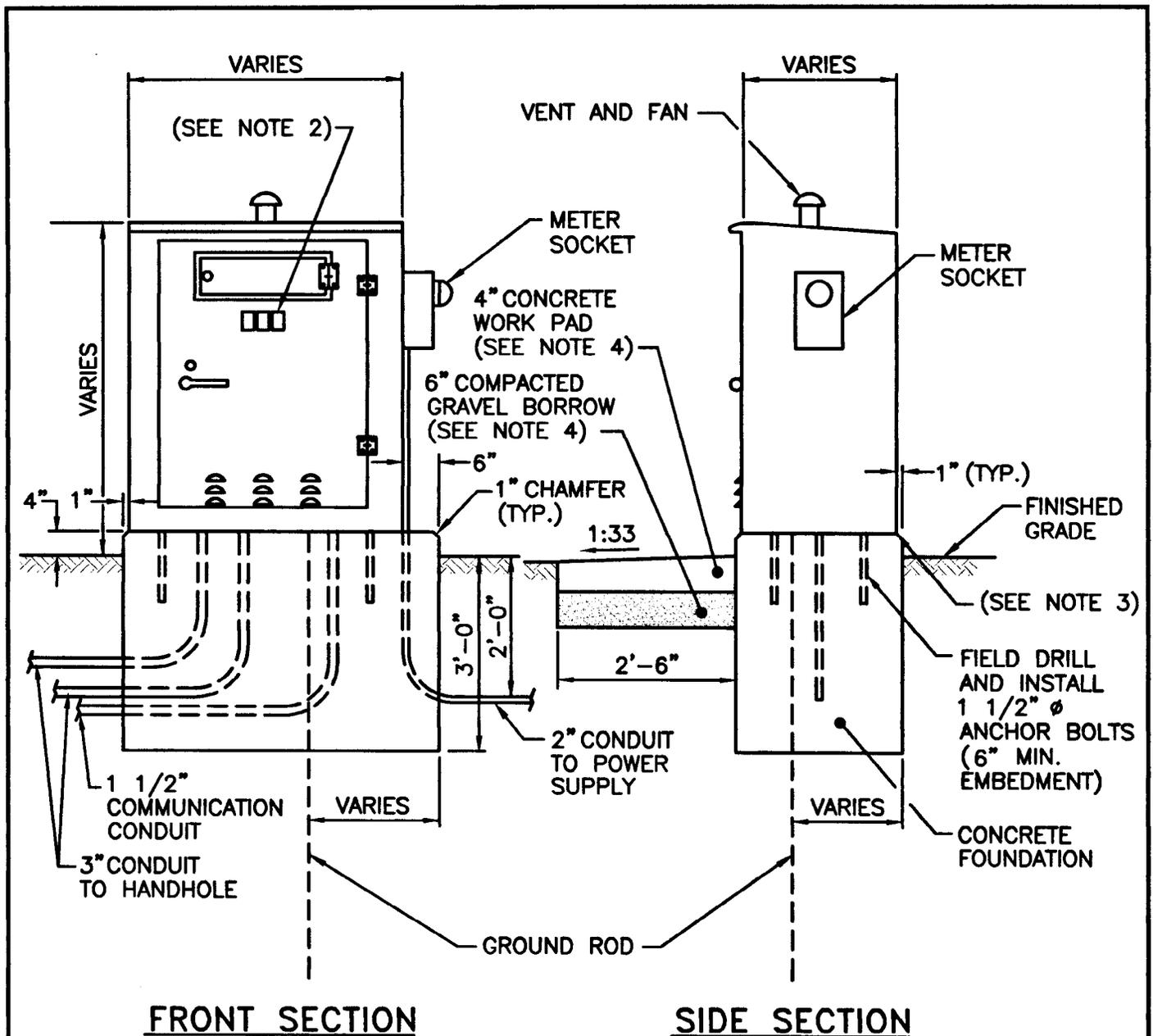
RISER POLE DETAIL

*James H. Caselli*  
CHIEF ENGINEER  
TRANSPORTATION

*Edmund Parker Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

JUNE 15, 1998  
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**NOTES:**

1. SHALL BE IN ACCORDANCE WITH SECTION T.12 OF THE R.I. STANDARD SPECIFICATION.
2. TRAFFIC SIGNAL NUMBER TO BE STENCILED ON EXTERIOR AND INTERIOR OF ALL CABINET DOORS (GROUND AND POLE MOUNTED). STENCIL SHALL BE 3" HIGH BLOCK LETTERS APPLIED WITH BLACK PAINT.
3. SILICONE CAULKING TO BE APPLIED BETWEEN CABINET AND FOUNDATION TO PROVIDE A PERMANENT WEATHER TIGHT SEAL.
4. IN UNPAVED AREAS A 4'-0"x2'-6" PAVED WORK PAD SHALL BE PLACED IN FRONT OF THE CABINET DOOR. PAD AND FOUNDATION SHALL BE COMPLETED IN ONE POUR.

**RHODE ISLAND DEPARTMENT OF TRANSPORTATION**

**GROUND MOUNTED  
CONTROLLER INSTALLATION**

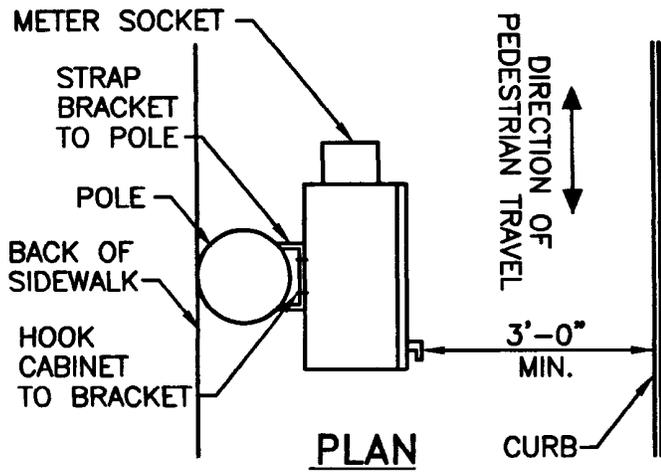
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*James A. Capaldi*  
CHIEF ENGINEER  
TRANSPORTATION

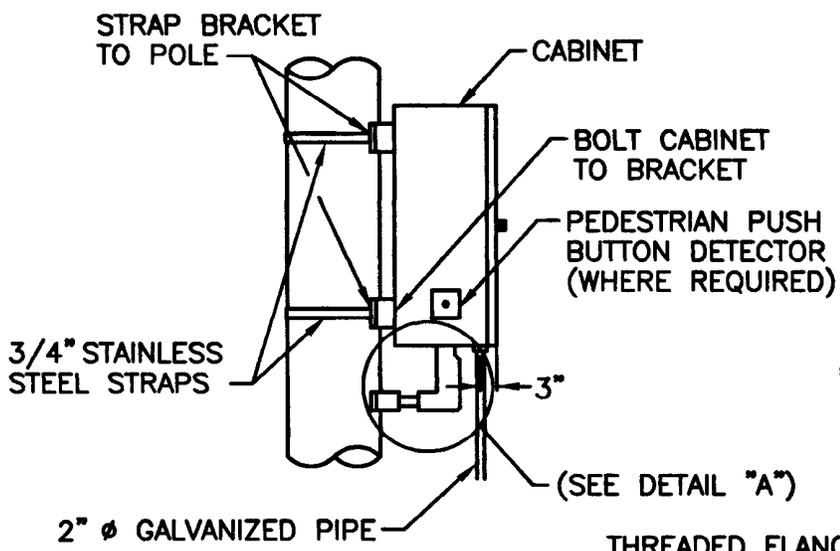
*Edmund J. Parker Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

JUNE 15, 1998  
ISSUE DATE

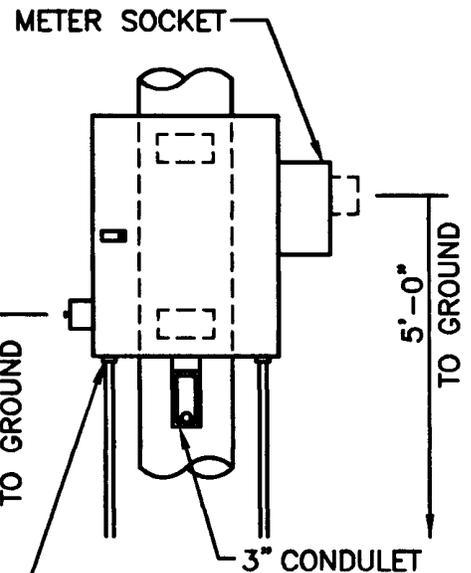




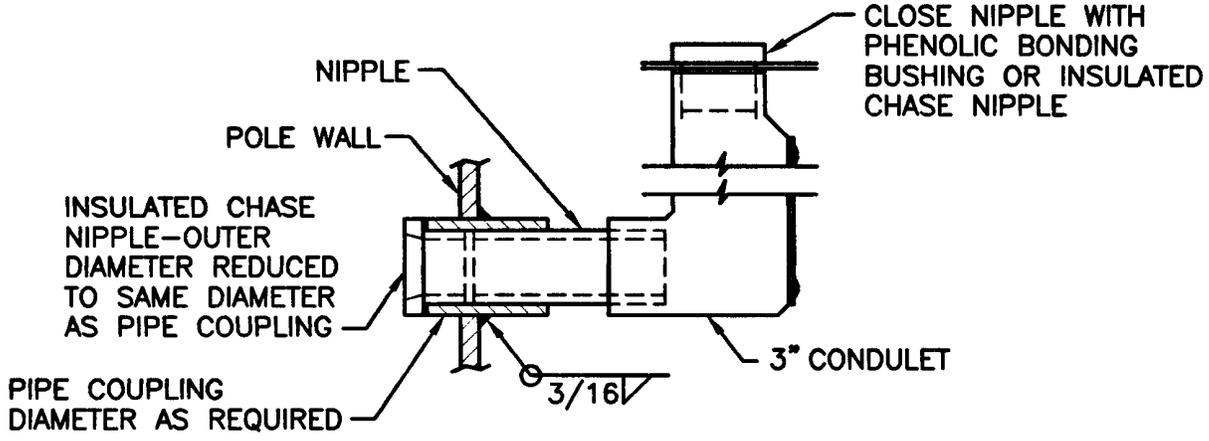
- NOTES:**
1. SHALL BE IN ACCORDANCE WITH SECTION T.12 OF THE R.I. STANDARD DETAILS.
  2. THE CABINET SHALL BE MOUNTED SO THAT HOLES IN THE POLE FOR WIRE ACCESS FITTINGS ARE AT 90° TO THE AXIS OF POLE LOAD.
  3. LOCATE BRACKETS AND ATTACHING BOLTS TO CLEAR EQUIPMENT WITHIN CABINET.
  4. IN UNPAVED AREAS, A 4'-0"x2'-6"x4" PAVED WORK PAD SHALL BE PLACED IN FRONT OF THE DOOR.
  5. ALL HARDWARE SHALL BE STAINLESS STEEL.
  6. LINE CONDUCTORS SHALL BE PROTECTED TO THE METER.



**SIDE ELEVATION**



**FRONT ELEVATION**



**DETAIL "A"**

**RHODE ISLAND DEPARTMENT OF TRANSPORTATION**

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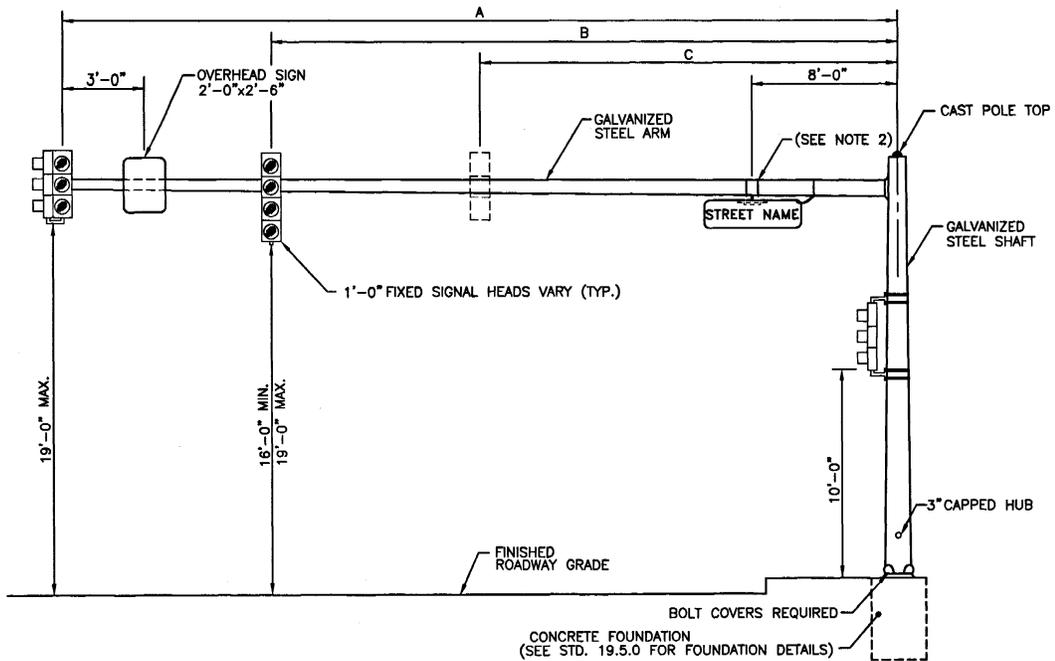
**POLE MOUNTED  
CONTROLLER INSTALLATION**

*John A. Casabla*  
CHIEF ENGINEER  
TRANSPORTATION

*Edmund J. Parker Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

JUNE 15, 1998  
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**NOTES:**

1. SHALL BE IN ACCORDANCE WITH SECTION T.11 OF THE R.I. STANDARD SPECIFICATIONS.
2. MOUNTING BRACKET AND SIGNAL HEADS WITH STAINLESS STEEL BANDS MUST BE ADJUSTABLE PERPENDICULAR TO THE SIGNAL SHAFT. PERPENDICULAR TO THE DIRECTION OF TRAFFIC. THE MOUNTING SHALL HOLD THE SIGN RIGIDLY IN PLACE AND RESIST MOVEMENT IN ALL DIRECTIONS.
3. ALL SIGNALS SHOULD INCLUDE 5" BACKPLATES FOR DESIGN PURPOSES.
4. ALL STREET SIGNS ARE 1'-6" HIGH BY 6'-0" LONG.
5. DOOR FACE AND VISORS SHALL BE PAINTED FLAT BLACK.
6. SIGNAL HEADS SHALL BE PLACED ON THE MAST ARM SO THAT THE RED LENSES ARE AT EQUAL HEIGHT ABOVE THE PAVEMENT SURFACE.

MAST ARM TYPE	DIMENSION A (FT.)	SIGNAL CONFIGURATION ● A	SIGNAL WEIGHT/AREA	DIMENSION B (FT.)	SIGNAL CONFIGURATION ● B	SIGNAL WEIGHT/AREA	DIMENSION C (FT.)	SIGNAL CONFIGURATION ● C	SIGNAL WEIGHT/AREA	FOUNDATION NO.
RI-20	20	1 WAY/3 SEC	74 LB./8.5 S.F.	12	1 WAY/3 SEC	74 LB./8.5 S.F.	N/A	N/A	N/A	F-50
RI-25	25	2 WAY/4 SEC	175 LB./17.3 S.F.	15	1 WAY/3 SEC	74 LB./8.5 S.F.	N/A	N/A	N/A	F-60
RI-30	30	2 WAY/4 SEC	175 LB./17.3 S.F.	20	2 WAY/3 SEC	158 LB./13.3 S.F.	N/A	N/A	N/A	F-70
RI-35	35	2 WAY/4 SEC	175 LB./17.3 S.F.	25	1 WAY/3 SEC	74 LB./8.5 S.F.	N/A	N/A	N/A	F-70
RI-40	40	3 WAY/3 SEC	202 LB./18.1 S.F.	30	2 WAY/3 SEC	158 LB./13.3 S.F.	20	1 WAY/3 SEC	74 LB./8.5 S.F.	F-90
RI-45	45	3 WAY/4 SEC	255 LB./23.7 S.F.	30	1 WAY/3 SEC	74 LB./8.5 S.F.	15	1 WAY/3 SEC	74 LB./8.5 S.F.	F-90
RI-50	50	3 WAY/4 SEC	255 LB./23.7 S.F.	30	1 WAY/4 SEC	90 LB./10.8 S.F.	15	1 WAY/3 SEC	74 LB./8.5 S.F.	F-100

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

STEEL MAST ARM

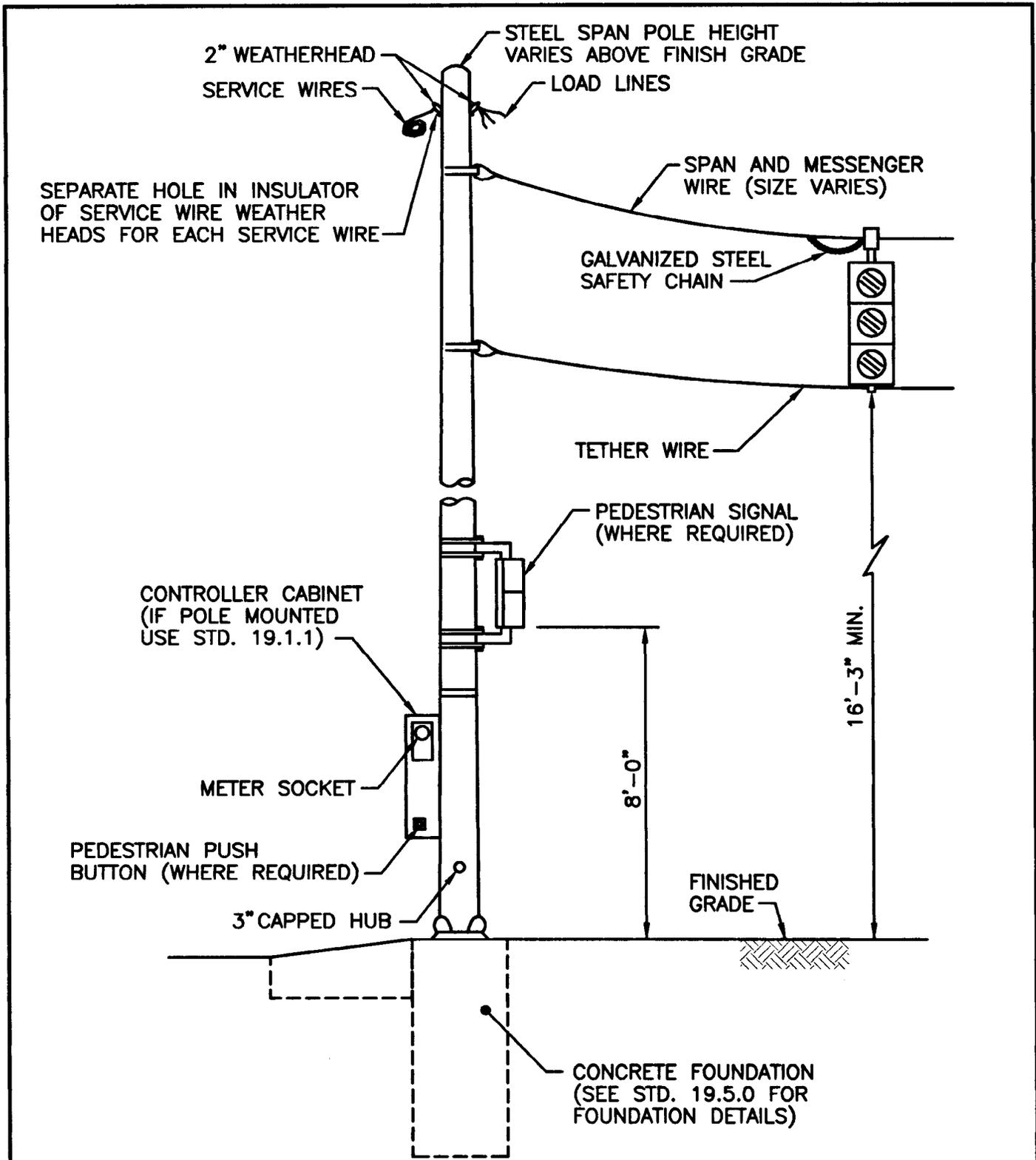
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*Signature*  
DIRECTOR OF TRANSPORTATION

*Signature*  
ENGINEER



**NOTE:**  
SHALL BE IN ACCORDANCE WITH SECTION T.11 OF THE R.I. STANDARD SPECIFICATIONS.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

STEEL SPAN POLE

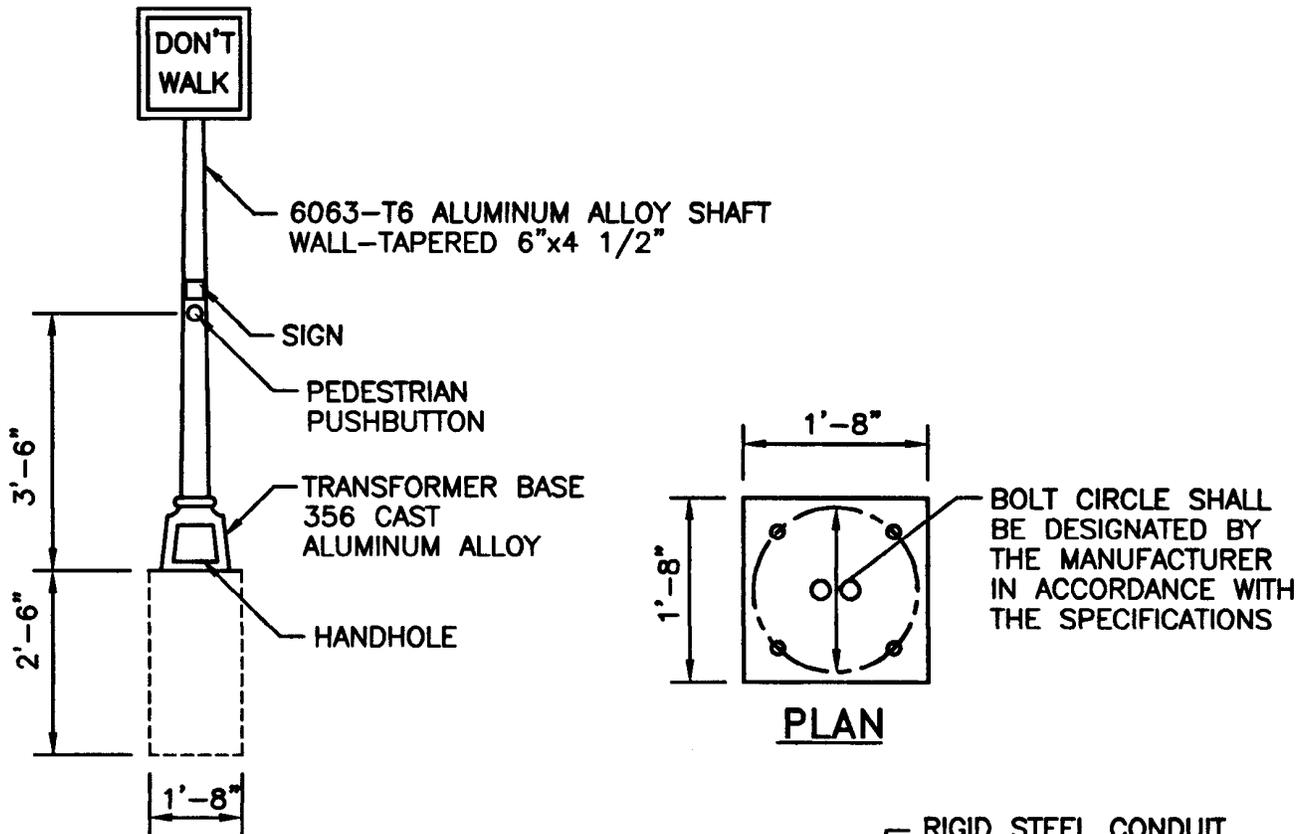
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*James A. Caselli*  
CHIEF ENGINEER  
TRANSPORTATION

*Edmund J. Parker Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

JUNE 15, 1998  
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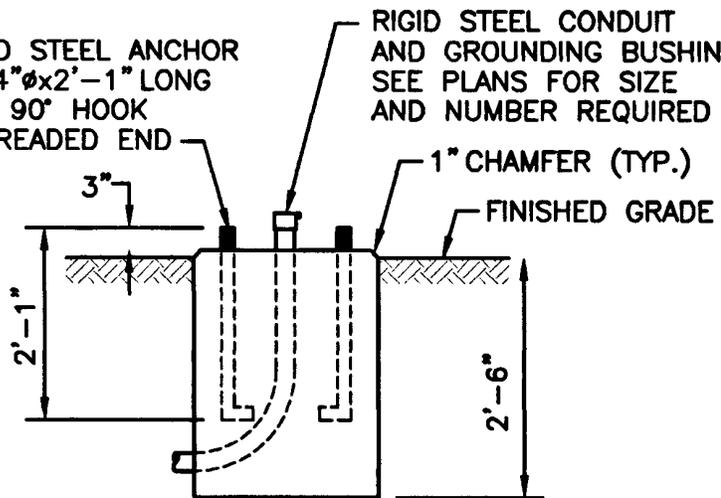


**POLE DETAIL**

**PLAN**

GALVANIZED STEEL ANCHOR BOLTS  $3/4"$   $\phi$  x 2'-1" LONG WITH 3" - 90° HOOK AND 4" THREADED END

RIGID STEEL CONDUIT AND GROUNDING BUSHING SEE PLANS FOR SIZE AND NUMBER REQUIRED



**ELEVATION**

**FOUNDATION DETAIL**

**NOTES:**

1. SHALL BE IN ACCORDANCE WITH SECTION T.11 OF THE R.I. STANDARD SPECIFICATIONS.
2. PRECAST CONCRETE FOUNDATIONS MAY BE PROVIDED AS AN ALTERNATE TO CAST IN-PLACE FOUNDATIONS.

**RHODE ISLAND DEPARTMENT OF TRANSPORTATION**

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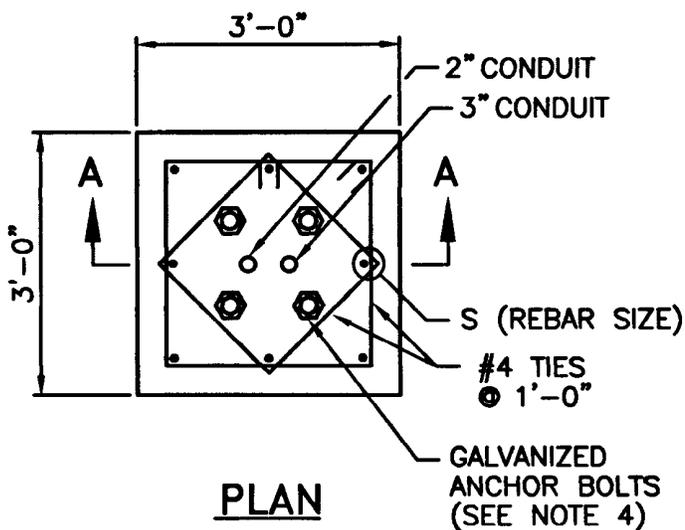
**ALUMINUM PEDESTAL**

*James H. Gualdi*  
 CHIEF ENGINEER  
 TRANSPORTATION

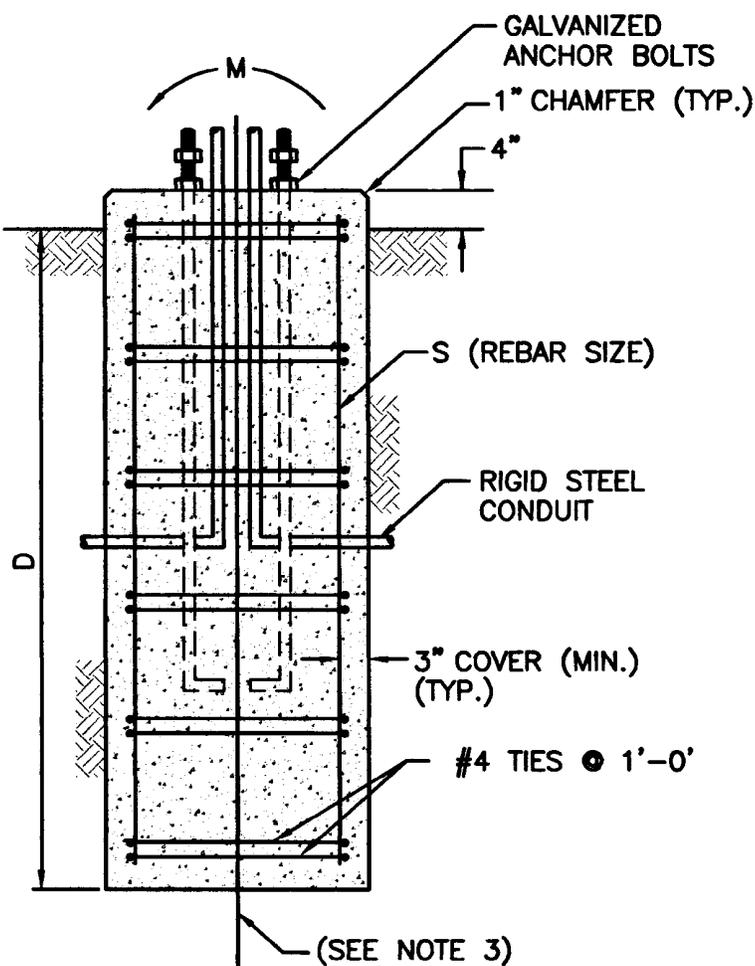
*Edmund J. Parker Jr.*  
 CHIEF DESIGN ENGINEER  
 TRANSPORTATION

JUNE 15, 1998  
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FOUNDATION NO.	FOUNDATION DIMENSIONS		
	M (FT. K.)	D	S
F-40	0 TO 40	6'-6"	8-#5
F-50	50	7'-0"	8-#6
F-60	60	7'-6"	8-#7
F-70	70	8'-0"	8-#7
F-80	80	9'-0"	8-#7
F-90	90	9'-6"	8-#8
F-100	100	10'-0"	8-#8
F-110	110	10'-6"	12-#8
F-120	120	11'-0"	12-#8



**NOTES:**

1. SHALL BE IN ACCORDANCE WITH SECTION T.11 OF THE R.I. STANDARD SPECIFICATIONS.
2. M (MOMENT AT BASE) TO BE FURNISHED BY MAST ARM FABRICATOR.
3. GROUND ROD 5/8"  $\phi$  x 10'-0" LONG, IF CONTROLLER IS POLE MOUNTED.
4. ANCHOR BOLT LENGTH AS REQUIRED TO DEVELOP THE CALCULATED BOLT TENSION.
5. CAST FOUNDATIONS AGAINST UNDISTURBED SOIL.
6. DESIGN SOIL PRESSURE = 1250 PSF.
7. REFERENCE STD. 19.2.0 AND 19.3.0.
8. BOLT TEMPLATE AND WOOD FORMS SHALL BE REMOVED PRIOR TO BACKFILLING.
9. M (MOMENT AT BASE) MAY BE REDUCED (DIVIDED BY 1.4) FOR LOADING COMBINATIONS CONTAINING WIND.
10. NO FOUNDATIONS TO BE PLACED IN CLAY, SILT OR MUCK.
11. PRIOR TO THE INSTALLATION OF POLE THE FOUNDATION SHALL BE MARKED BY A TRAFFIC CONE, DOUBLE NUTTED TO THE ANCHOR BOLTS.
12. FOUNDATION DESIGN IS BASED ON WELL GRADED GRANULAR SOIL CONDITIONS. A SPECIAL DESIGN IS REQUIRED IF FIELD CONDITIONS VARY FROM THIS.

**RHODE ISLAND DEPARTMENT OF TRANSPORTATION**

**MAST ARM AND SPAN POLE FOUNDATION**

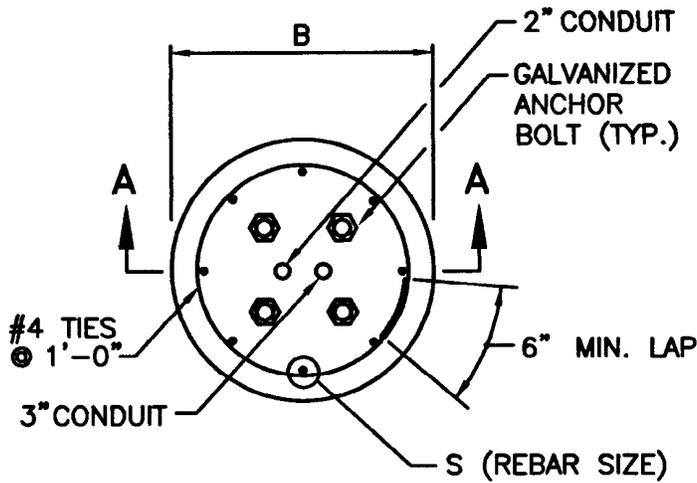
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TRANSPORTATION

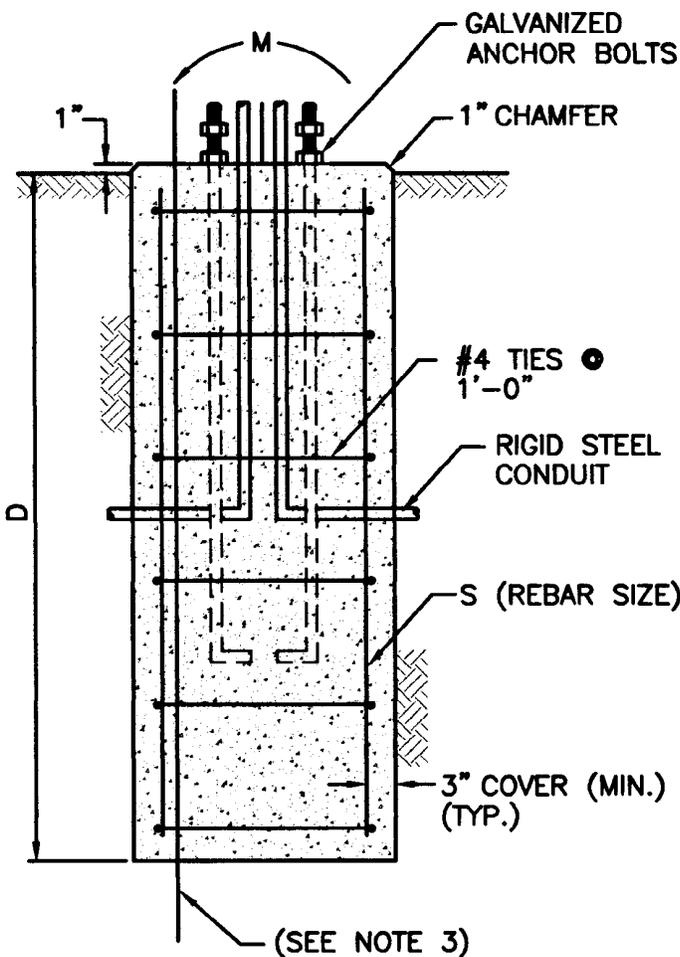
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CHIEF DESIGN ENGINEER  
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**PLAN**



**SECTION A-A**

FOUNDATION DIMENSIONS			
M (FT. K.)	B	D	S
0 TO 30	2'-6"	6'-0"	8-#5
40	3'-0"	6'-6"	8-#5
50	3'-0"	7'-0"	8-#6
60	3'-0"	7'-6"	8-#7
70	3'-0"	8'-0"	8-#7
80	3'-0"	9'-0"	8-#7
90	3'-0"	9'-6"	8-#8
100	3'-0"	10'-0"	8-#8
110	3'-0"	10'-6"	12-#8
120	3'-0"	11'-0"	12-#8

**NOTES:**

1. SHALL BE IN ACCORDANCE WITH SECTION T.11 OF THE R.I. STANDARD SPECIFICATIONS.
2. M (MOMENT AT BASE) TO BE FURNISHED BY SPAN POLE FABRICATOR.
3. GROUND ROD 5/8"  $\phi$  x 10'-0" LONG, IF CONTROLLER IS POLE MOUNTED.
4. CAST FOUNDATIONS AGAINST UNDISTURBED EARTH.
5. REFERENCE STD. 19.2.0.
6. NO FOUNDATIONS TO BE PLACED IN CLAY, SILT OR MUCK.
7. M (MOMENT AT BASE) MAY BE REDUCED (DIVIDED BY 1.4) FOR LOADING COMBINATIONS CONTAINING WIND.
8. DESIGN SOIL PRESSURE 1250 PSF.
9. PRIOR TO INSTALLATION OF THE POLES, THE FOUNDATION BOLTS SHALL BE MARKED BY A TRAFFIC CONE AND DOUBLE-NUTTED TO THE ANCHOR BOLT.
10. FOUNDATION DESIGN IS BASED ON WELL GRADED GRANULAR SOIL CONDITIONS. A SPECIAL DESIGN IS REQUIRED IF FIELD CONDITIONS VARY FROM THIS.

**RHODE ISLAND DEPARTMENT OF TRANSPORTATION**

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**ORNAMENTAL MAST ARM FOUNDATION**

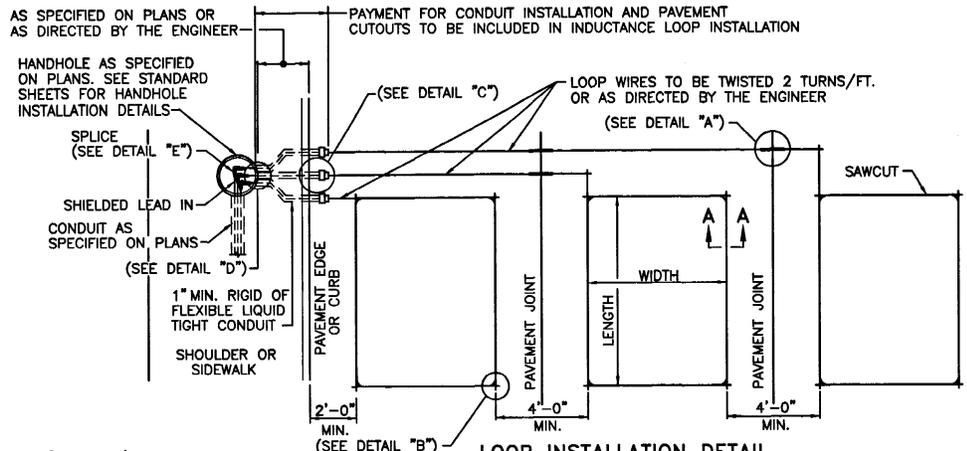
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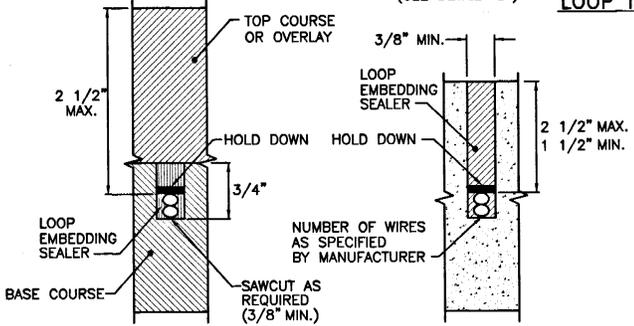
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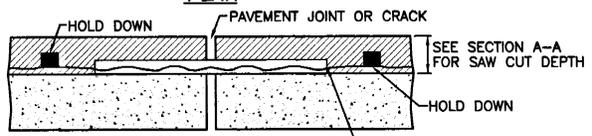
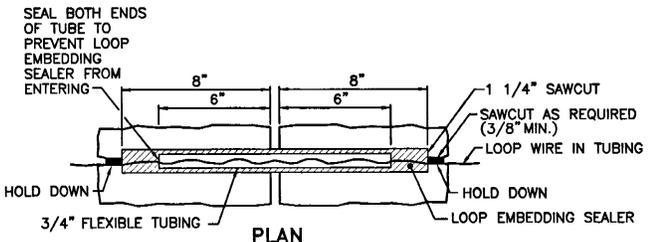


**LOOP INSTALLATION DETAIL**



**SAWCUT CROSS SECTION IN ASPHALT WHERE AN OVERLAY IS BEING PLACED**

**SECTION A-A**



**SIDE ELEVATION DETAIL "A"**

**CROSSING PAVEMENT JOINTS OR CRACKS**

NOTE: USE SHORT (2" TYP.) PIECE OF OPEN CELLED POLYURETHANE BACKER ROD FOAM SEALER STRIPS AT 2'-0" CENTERS TO HOLD LOOP WIRES IN PLACE UNTIL SEALER SETS. DO NOT USE SHARP OBJECTS TO HOLD WIRE DOWN.

**SAWCUT CROSS SECTION IN CONCRETE OR ASPHALT**



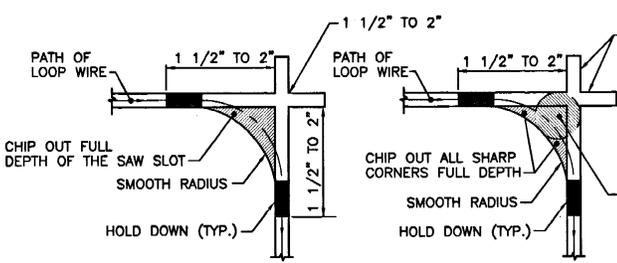
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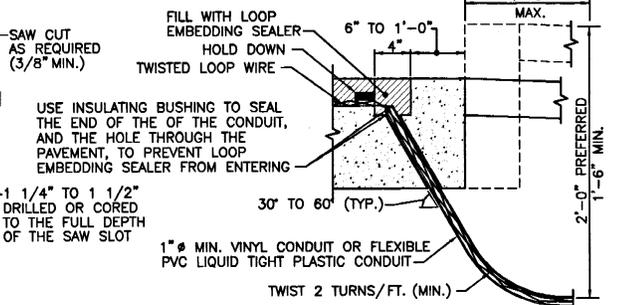
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CHIEF DESIGN ENGINEER  
TRANSPORTATION

*Edward P. Gagnoli*  
DESIGNER  
TRANSPORTATION



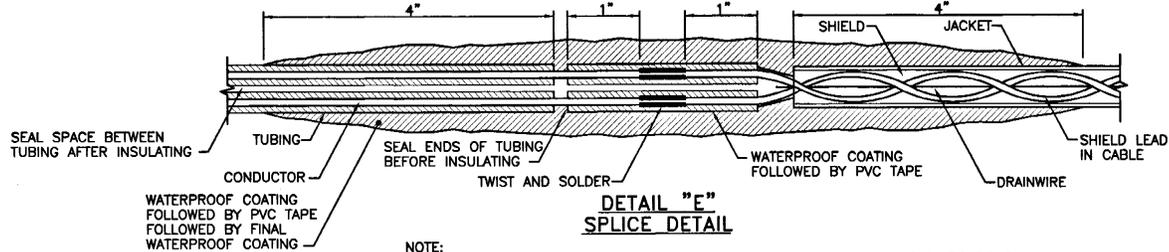
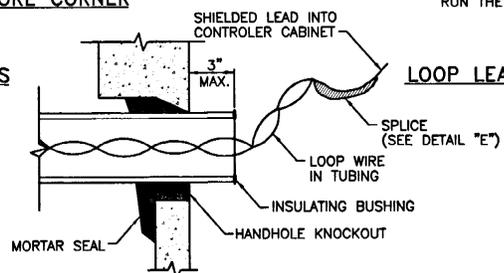
NOTE: PLACE THE LOOP WIRE NEAR THE CENTER OF THE CORNER TO ALLOW THE SEALANT TO FLOW ON BOTH SIDES OF WIRE.



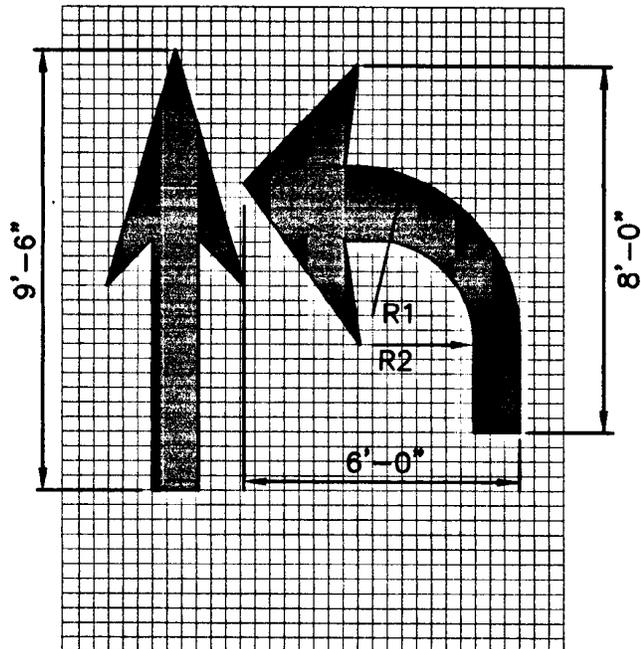
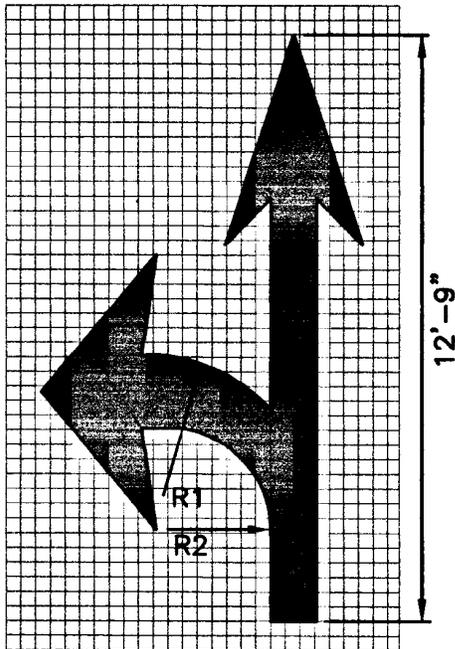
NOTE: CURB DETAIL IS SHOWN BY THE DASHED LINES. RUN THE CONDUIT UNDER THE CURB.

**DETAIL "B" CORNER DETAILS**

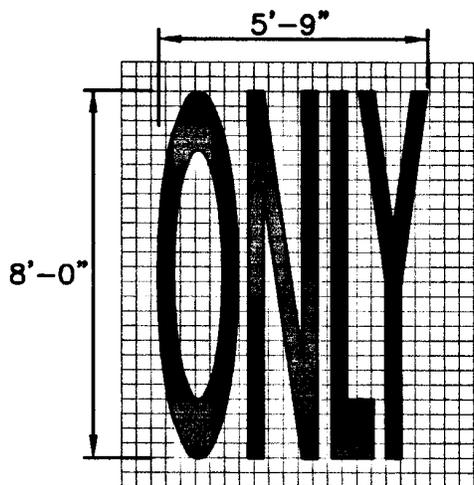
**DETAIL "C" LOOP LEAD IN AT PAVEMENT EDGE**



NOTE: SHALL BE IN ACCORDANCE WITH SECTION T.13 OF THE R.I. STANDARD SPECIFICATIONS.



R1 = 3'-2"  
R2 = 2'-2"



**NOTES:**

1. SHALL BE IN ACCORDANCE WITH SECTION T.20 OF THE R.I. STANDARD SPECIFICATIONS.
2. THE LONGITUDINAL SPACE BETWEEN WORD OR SYMBOL MESSAGES, INCLUDING ARROWS, SHOULD BE AT LEAST FOUR TIMES THE HEIGHT OF THE CHARACTER FOR LOW SPEED ROADS BUT NOT MORE THAN TEN TIMES THE HEIGHT OF THE CHARACTER UNDER ANY CONDITIONS.
3. THE SPACING OF THE PAVEMENT MARKINGS WILL BE AS SHOWN ON THE PLAN AND AS PER THE MUTCD.
4. SYMBOLS AND WORDS SHALL MEET THE REQUIREMENTS OF THE FHWA "STANDARD ALPHABET AND SYMBOLS FOR HIGHWAY PAVEMENT MARKINGS.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

PAVEMENT MARKINGS  
ARROWS AND ONLY

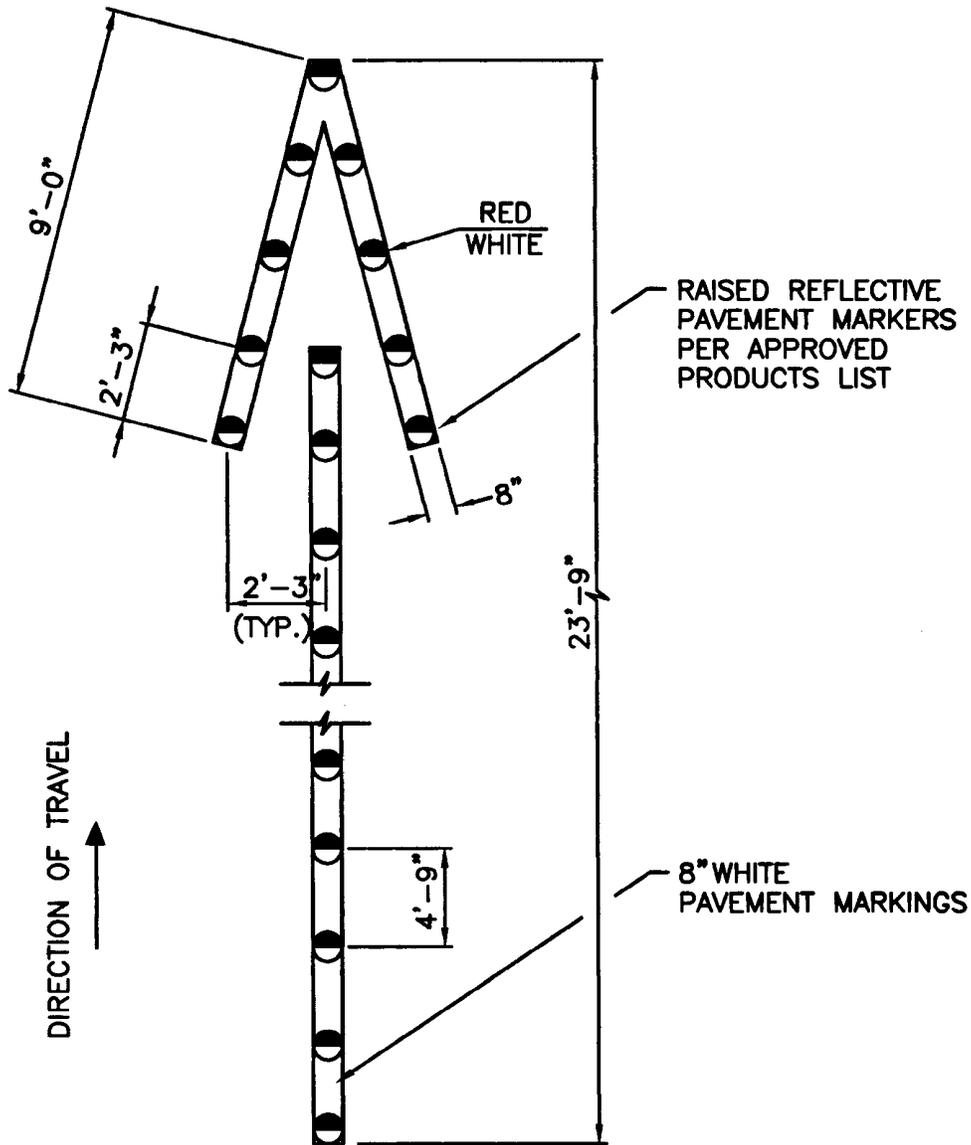
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CHIEF ENGINEER  
TRANSPORTATION

*Edmund J. Parker Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

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**NOTES:**

1. SHALL BE IN ACCORDANCE WITH SECTION T.20 OF THE R.I. STANDARD SPECIFICATIONS.
2. THE RAISED REFLECTIVE PAVEMENT MARKERS SHALL BE INSTALLED AFTER THE 8" ARROW HAS BEEN PLACED.

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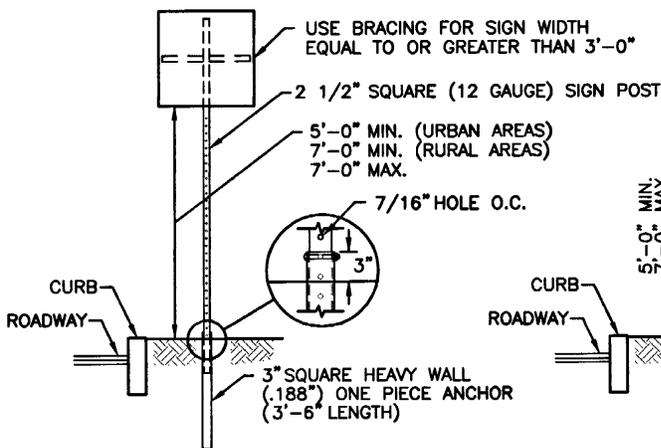
**BI-DIRECTIONAL CONTROL DEVICE**

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 TRANSPORTATION

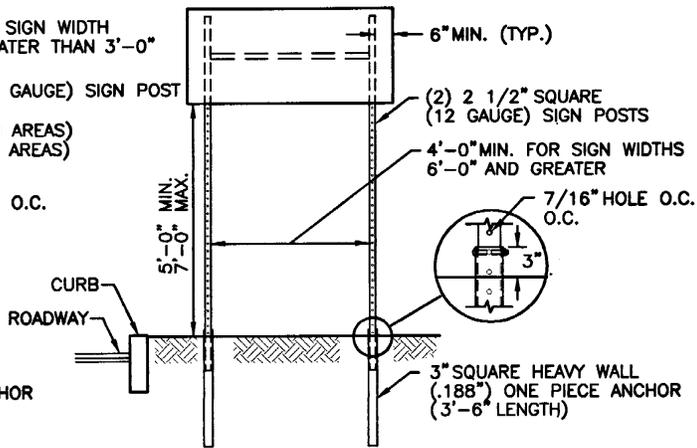
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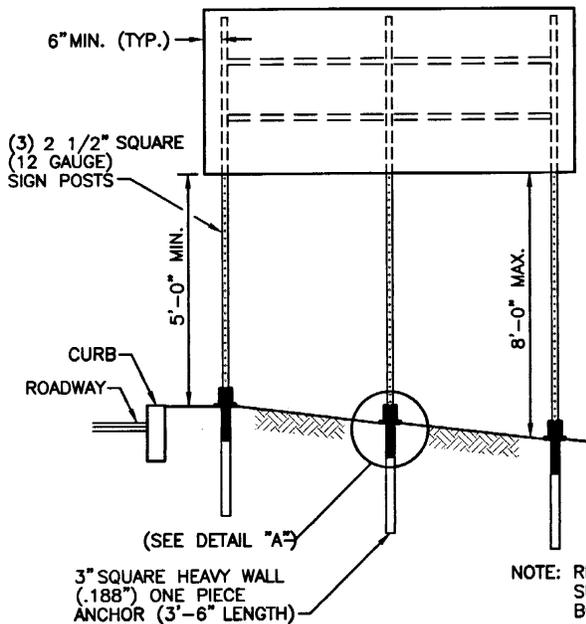




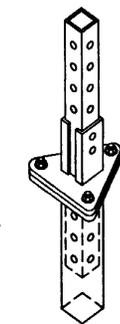
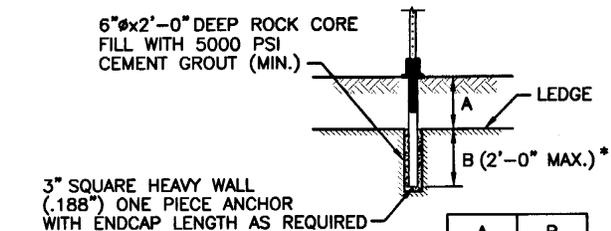
**SIGNS UP TO 12 SQ. FT.**



**SIGNS UP TO 28 SQ. FT.**



**SIGNS UP TO 8'-0" Wx4'-0" H**



NOTE: RECOMMENDED TORQUE ON SLIP-BASE FLANGE HEAD BOLT AND NUT 40 FT. LBS.

A	B
3'-0"	1'-0"
2'-0"	1'-0"
1'-0"	1'-6"
0"	2'-0"

\* AT WEATHERED ROCK, DEPTH AS PER ENGINEER

**TYPICAL POST AT LEDGE  
LESS THAN 3'-0" BELOW GRADE**

**NOTES:**

1. SHALL BE IN ACCORDANCE WITH SECTION T.15 OF THE R.I. STANDARD SPECIFICATIONS.
2. SIGN SUPPORTS HAVE BEEN DESIGNED IN ACCORDANCE WITH AASHTO SPECIFICATIONS FOR A 10-YEAR MEAN WIND RECURRENCE INTERVAL.
3. FOR INSTALLATION IN GROUND OR BITUMINOUS CONCRETE DRIVE SIGN POST ANCHOR TO REQUIRED DEPTH SO THAT THE HOLE WILL MATCH TO SIGN POST ABOVE GROUND FOR THE BOLT CONNECTION. INSERT SIGN POST AND BOLT IN PLACE.
4. FOR INSTALLATION IN CONCRETE SEE STD. 25.3.0 AND FOLLOW THE PROCEDURE IN NOTE 2.
5. FOR INSTALLATION IN LEDGE LESS THAN 3'-0" BELOW GRADE SEE DETAIL ABOVE.
6. EDGE OF SIGN SHALL BE 1'-6" (MIN.) FROM EDGE OF CURB IN URBAN AREAS AND 6'-0" (MIN.) FROM EDGE OF CURB IN EDGE OF CURB IN RURAL AREAS.
7. INSTALLATION PROCEDURES SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.
8. BREAKAWAY SIGN SUPPORTS SHALL BE FABRICATED FROM STEEL AND SHALL CONFORM TO THE BREAKAWAY DESIGN SHOWN ON THIS SHEET.
9. STEEL POSTS SHALL CONFORM TO ASTM-A361, FY= 55 KSI. THE CROSS SECTION OF THE POST SHALL BE SQUARE TUBE FORMED OF 12 GAUGE (.105" U.S.S. GAUGE) COLD-ROLLED CARBON STEEL SHEETS WHICH HAVE BEEN ZINC COATED (1.25 OZ.) CONFORMING TO ASTM-A525, CAREFULLY ROLLED TO SIZE AND WELDED DIRECTLY IN THE CORNER BY HIGH FREQUENCY RESISTANCE WELDING OR EQUAL AND EXTERNALLY SCARED TO AGREE WITH CORNER RADII. STANDARD CORNER RADIUS SHALL BE 3/32" PLUS OR MINUS 1/64".
10. ALL BOLTS SHALL CONFORM TO ASTM-A307, CLASS A.
11. ALL BOLTS, NUTS AND WASHERS SHALL BE GALVANIZED AS PER ASTM-A153.
12. FOR SIGNS GREATER THAN 32 SQ. FT., REFER TO STD. 30.1.0, 30.1.1, 30.2.0, 30.2.1, 30.3.0, 30.3.1, 30.4.0, 30.4.1, 30.4.2 AND 30.4.3.

**RHODE ISLAND DEPARTMENT OF TRANSPORTATION**

**SIGN POST SELECTION AND INSTALLATION DETAILS  
SQUARE POST (SIGNS UP TO 8'-0" Wx4'-0" H)**

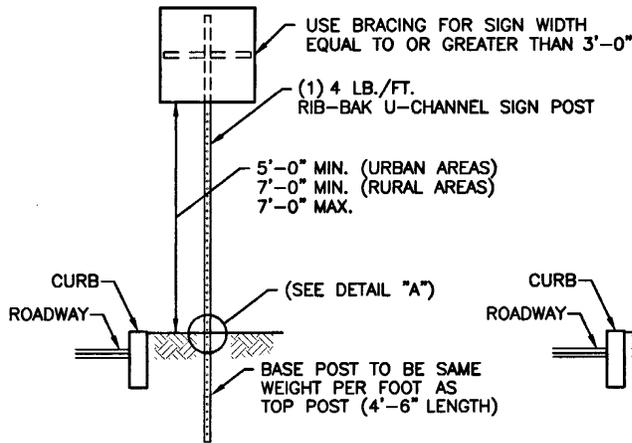
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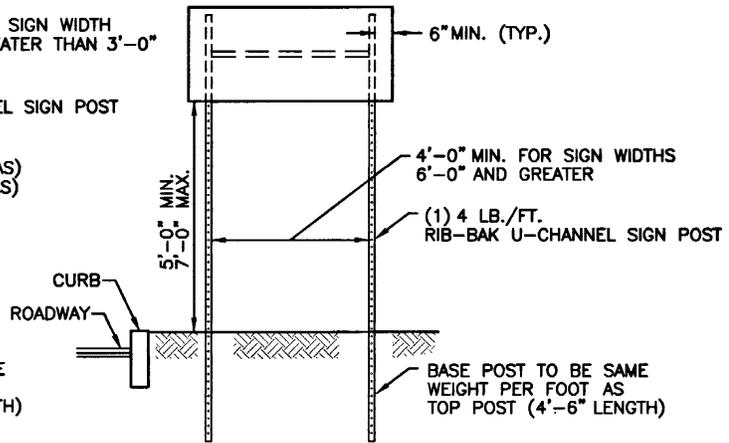
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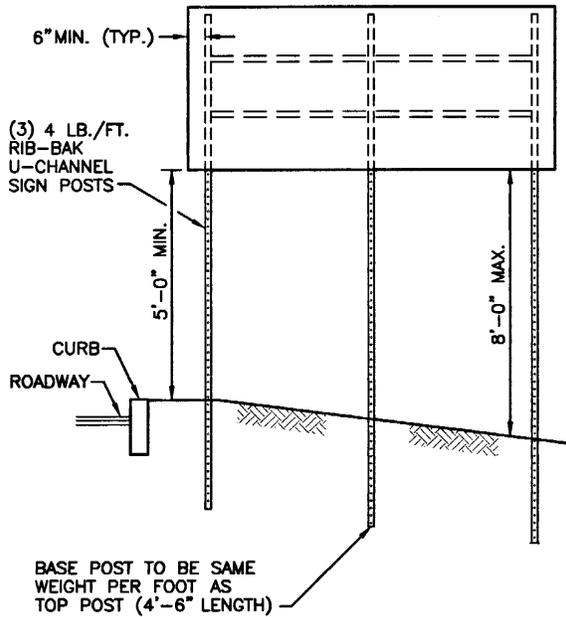




SIGNS UP TO 12 SQ. FT.



SIGNS UP TO 28 SQ. FT.

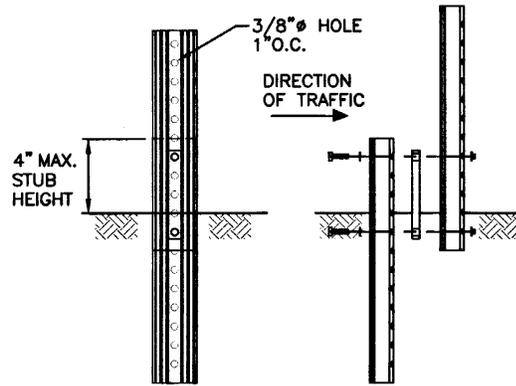


SIGNS UP TO 40 SQ. FT.



TOP VIEW

RECOMMENDED TORQUE VALUES:  
BOLTS TO THREADED BAR SPACER  
20 FT. LBS.  
SELF-LOCKING FLANGE NUT TO BOLTS  
20 FT. LBS.



FRONT VIEW RIGHT SIDE VIEW  
DETAIL "A"

**INSTALLATION PROCEDURE:**

1. REMOVE A SPADE FULL OF SOIL (APPROXIMATELY 2" DEEP) FROM WHERE THE BASE POST WILL BE LOCATED.
2. DRIVE THE BASE POST IN THE CENTER OF THE HOLE JUST CREATED, TO WITHIN 4" OF GRADE LEVEL.
3. PLACE ONE BOLT AND FLAT WASHER IN THE TOP HOLE OF THE BASE POST. (IF THE TOP HOLE ON THE BASE POST, OR THE BOTTOM HOLE ON THE TOP POST IS LESS THAN 3/4" FROM END OF THE POST USE THE SECOND AND SIXTH HOLES.) WITH THE THREADED BAR SPACER ALIGNED WITH TOP HOLE ON THE BACK SIDE OF THE BASE POST, SECURELY TIGHTEN THE BOLT TO 20 FT. LBS. OF TORQUE. REPEAT THIS PROCESS FOR THE LOWER BOLT.
4. NEST THE TOP POST OVER THE PROTRUDING BOLTS ON THE BASE POST. PLACE A SELF-LOCKING FLANGE NUT ON EACH BOLT AND TIGHTEN SECURELY TO 20 FT. LBS. OF TORQUE.
5. REPLACE SOIL REMOVED IN STEP 1.
6. IN TRIPLE POST INSTALLATIONS USING 4 LB./FT. POSTS IN WEAK SOIL, A 1'-0"W x 6"H SOIL PLATE IS REQUIRED.

**NOTES:**

1. SHALL BE IN ACCORDANCE WITH SECTION T.15 OF THE R.I. STANDARD SPECIFICATIONS.
2. THE SILVER ANODIZED BAR SPACER IS FOR USE WITH 2, 2.5 AND 2.75 LB./FT. RIB-BAK POST GRADE SP-80 ONLY.
3. THE GOLD ANODIZED BAR SPACER IS FOR USE WITH 3 AND 4 LB./FT. RIB-BAK POST GRADE SP-80 ONLY.
4. INSTALLATION PROCEDURES SHALL BE IN ACCORDANCE WITH THE MANUFACTURE'S RECOMMENDATIONS.
5. FOR SIGNS GREATER THAN 40 SQ. FT., REFER TO STD. 30.1.0, 30.1.1, 30.2.0, 30.2.1, 30.3.0, 30.3.1, 30.4.0, 30.4.1, 30.4.2 AND 30.4.3

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

SIGN POST SELECTION AND INSTALLATION DETAILS  
U-CHANNEL POST (SIGNS UP TO 8'-0"Wx4'-0"H)

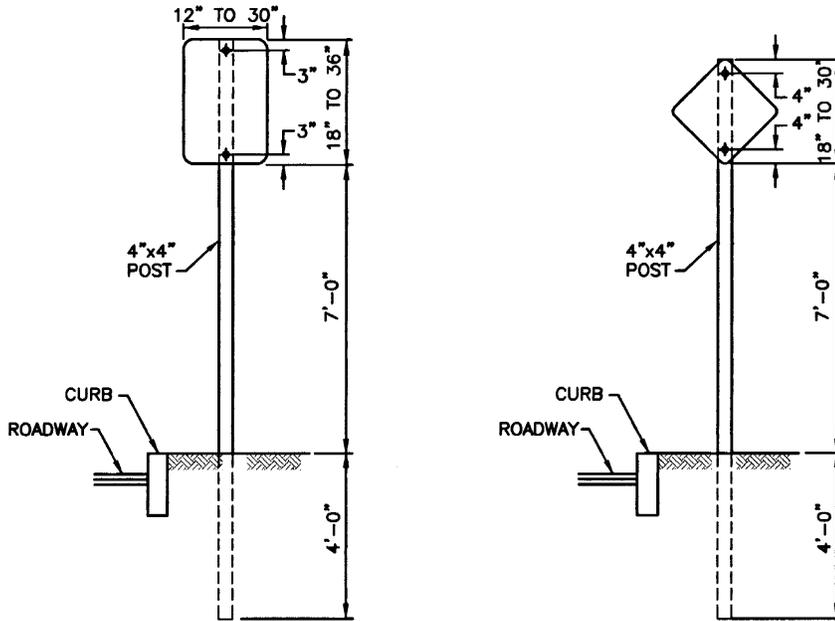
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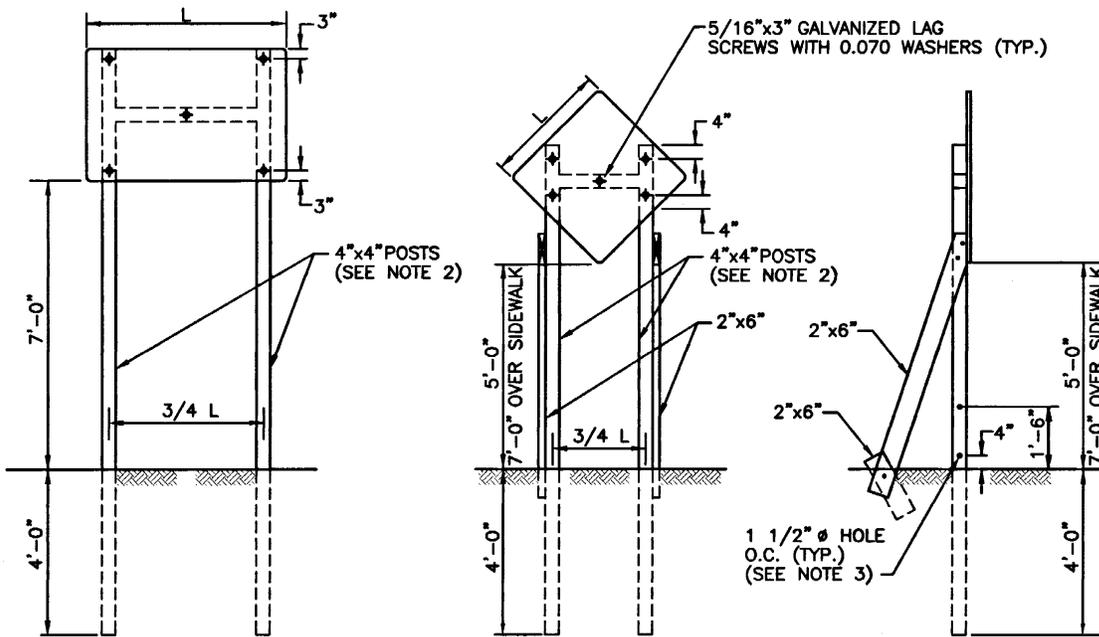
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SIGNS UP TO 10 SQ. FT.



SIGNS UP TO 60 SQ. FT.

NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION T.15 OF THE R.I. STANDARD SPECIFICATIONS.
2. USE (2) 4"x6" POSTS FOR SIGN AREAS GREATER THAN 20 SQ. FT.
3. DRILL 1 1/2" Ø HOLES FOR 4"x6" POSTS ONLY.
4. FOR SIGNS 5'-0"x5'-0" AND LARGER USE DIAGONAL BRACING ON EACH VERTICAL POST AND 4 LAG SCREWS
5. CONSTRUCTION AND TEMPORARY SIGN PANELS SHALL BE 3/4" THICK EXTERIOR GRADE PLYWOOD OR ALUMINUM.
6. ALL SIGN SUPPORTS (INCLUDING TEMPORARY) MUST BE SUCCESSFULLY CRASH TESTED.
7. FOR SIGNS GREATER THAN 60 SQ. FT., REFER TO STD. 30.1.0, 30.1.1, 30.2.0, 30.2.1, 30.3.0, 30.3.1, 30.4.0, 30.4.1, 30.4.2 AND 30.4.3.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

CONSTRUCTION AND TEMPORARY  
SIGN MOUNTINGS (SIGNS UP TO 60 SQ. FT.)

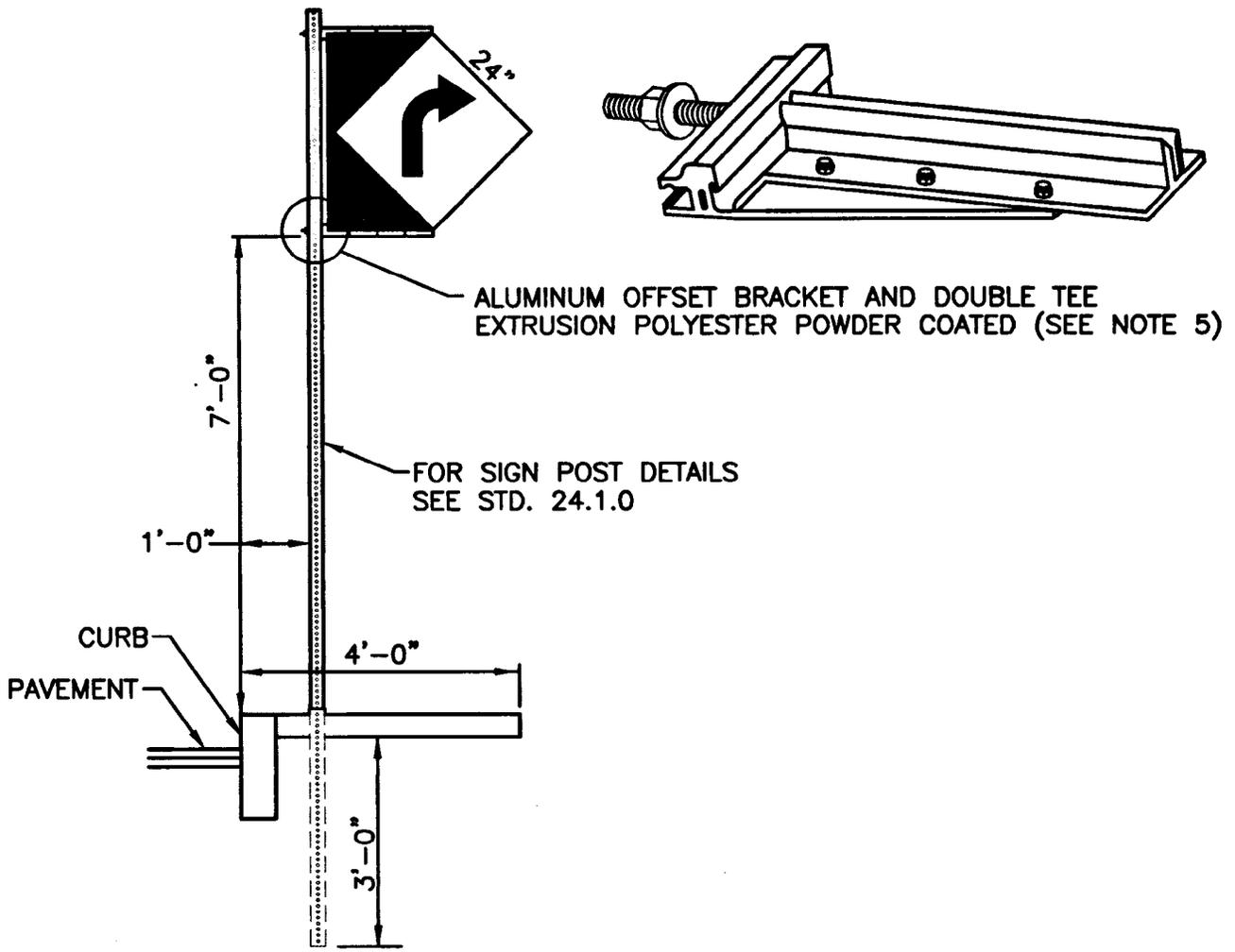
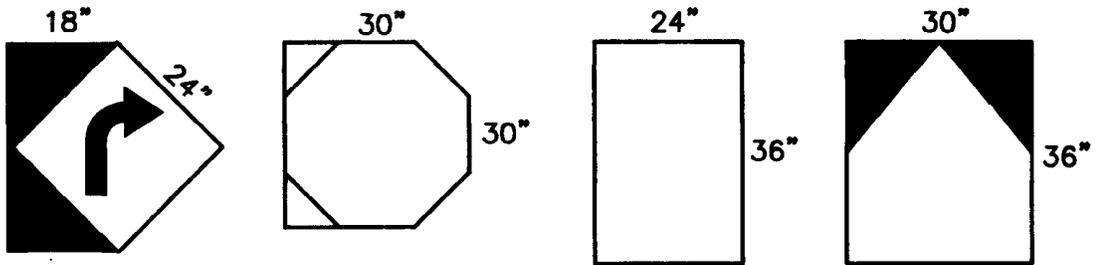
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**NOTES:**

1. SHALL BE IN ACCORDANCE WITH SECTION T.15 OF THE R.I. STANDARD SPECIFICATIONS.
2. THIS SIGN MOUNTING SHALL NOT REPLACE STD. 24.6.0 PARKING SIGN MOUNTING.
3. INSTALLATION SOIL, GRAVEL, OR ASPHALT CAP AND SLEDGE HAMMER. CONCRETE USE PNEUMATIC HAMMER OR CONCRETE DRILL.
4. MAXIMUM SIGN AREA 7.5 SQ. FT.
5. DOUBLE TEE EXTRUSION MAY BE ORDERED OR CUT TO EQUAL HORIZONTAL EDGE OF SIGN.

**RHODE ISLAND DEPARTMENT OF TRANSPORTATION**

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**CANTILEVER BREAKAWAY SIGN SUPPORT  
FOR 4'-0" TO 5'-0" SIDEWALKS**

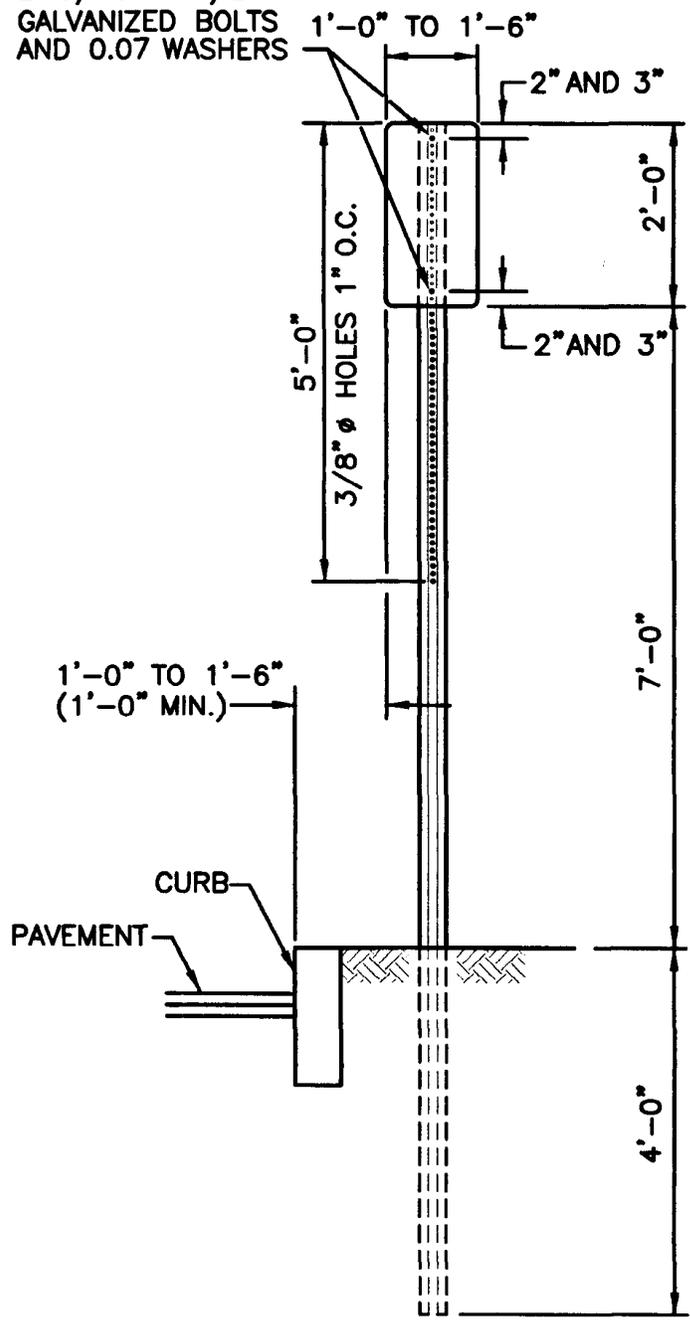
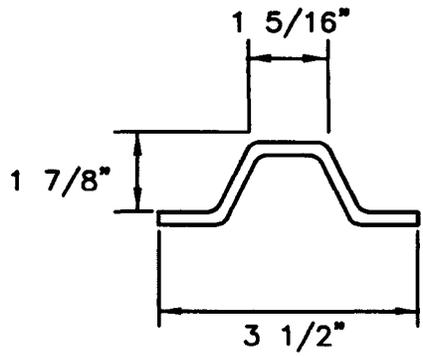
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2-5/16"x2 1/2"  
GALVANIZED BOLTS  
AND 0.07 WASHERS



- NOTES:**
1. SHALL BE IN ACCORDANCE WITH SECTION T.15 OF THE STANDARD SPECIFICATIONS.
  2. PARKING SIGNS SHALL BE SET AT AN ANGLE OF NOT LESS THAN 30° NOR MORE THAN 45° WITH A LINE PARALLEL TO FLOW OF TRAFFIC, 1'-6" (1'-0" MIN.) FROM EDGE OF CURB FACE.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

PARKING SIGN MOUNTING DETAIL

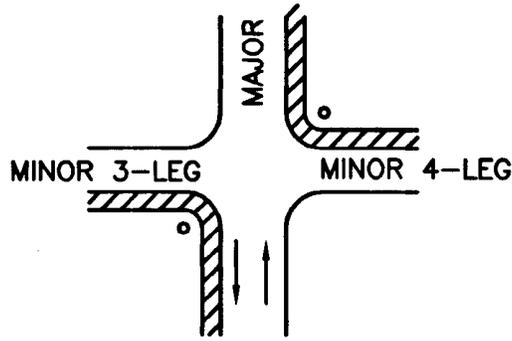
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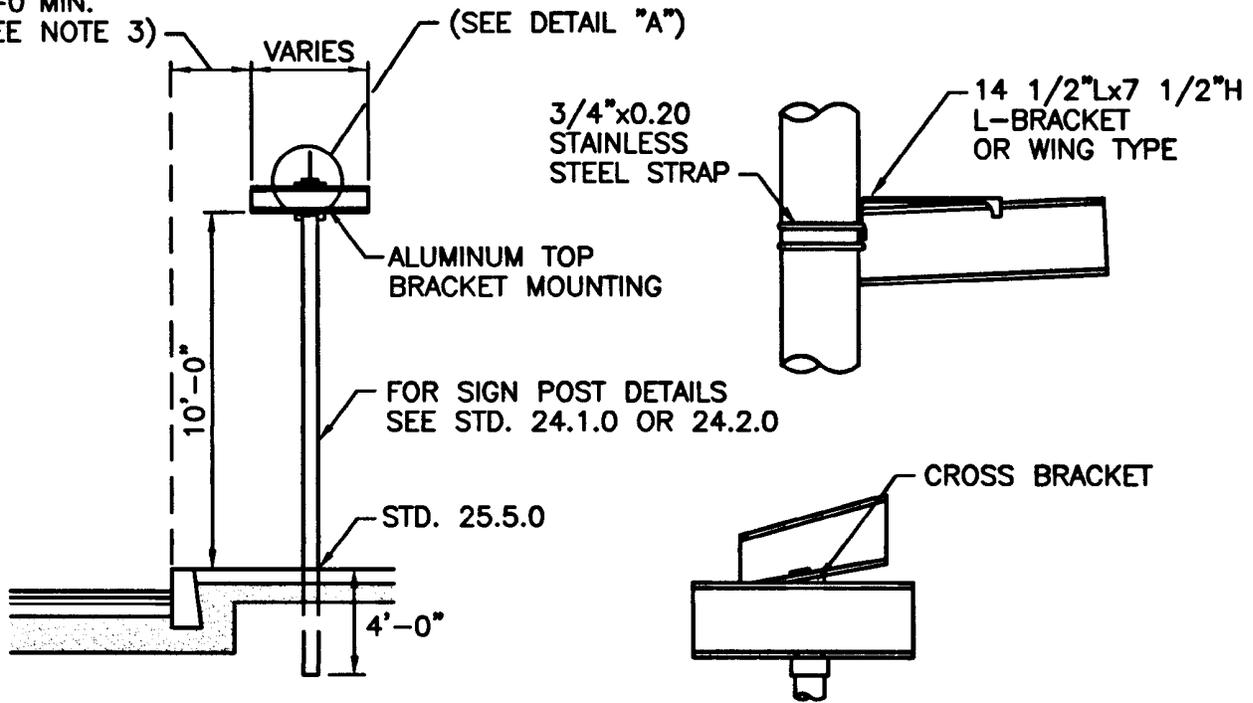




**TYPICAL SIGN LOCATION**

IF SIGNS ARE ON THEIR OWN SUPPORT POST, THE POST SHALL BE LOCATED NEARER TO THE MAJOR STREET AND WITHIN 5'-0" OF THE P.T. OF THE CURVE.

2'-0"+ DESIRABLE  
1'-0" MIN.  
(SEE NOTE 3)



**POST ANCHOR**

**DETAIL "A"**

**NOTES:**

1. SHALL BE IN ACCORDANCE WITH SECTION T.15 OF THE R.I. STANDARD SPECIFICATIONS.
2. EACH SIGN SHALL HAVE LEGEND ON BOTH SIDES.
3. POSTS SHALL BE INSTALLED AS CLOSE AS POSSIBLE TO THE BACK OF SIDEWALK, UNLESS SPACE DOES NOT PERMIT.

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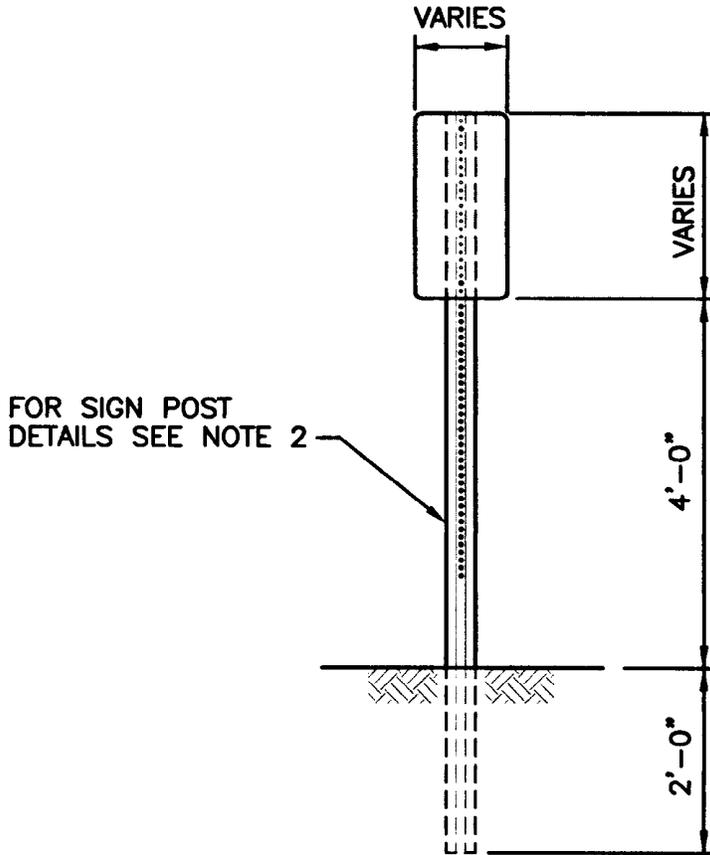
**STREET SIGN MOUNTING DETAIL**

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*Edmund J. Parker Jr.*  
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TRANSPORTATION

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FOR SIGN POST  
DETAILS SEE NOTE 2

**NOTES:**

1. SHALL BE IN ACCORDANCE WITH SECTION T.19 OR THE R.I. STANDARD SPECIFICATIONS.
2. POSTS FOR MARKERS SHALL CONFORM TO STD. 24.6.0
3. POST LENGTH FOR MILE MARKER SHALL BE 8'-0" WITH 3/8"  $\phi$  HOLES 1" O.C. FOR A LENGTH OF 2'-6" FROM TOP OF POST.

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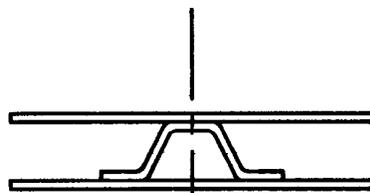
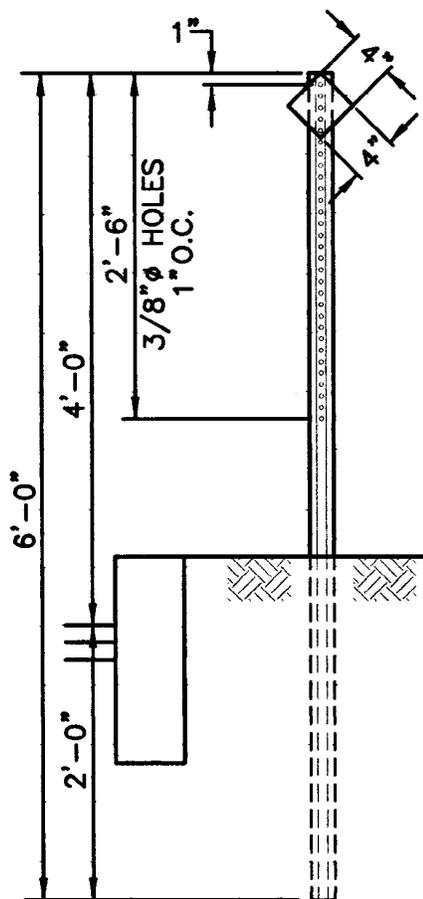
**MILE MARKER MOUNTING DETAIL**

*James H. Casale*  
CHIEF ENGINEER  
TRANSPORTATION

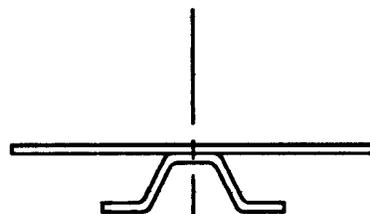
*Edmund J. Parker Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

JUNE 15, 1998  
ISSUE DATE

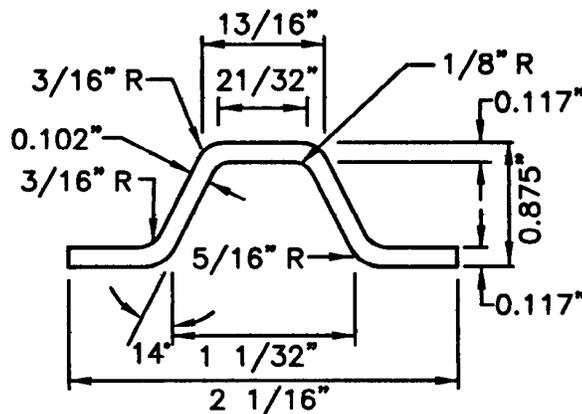
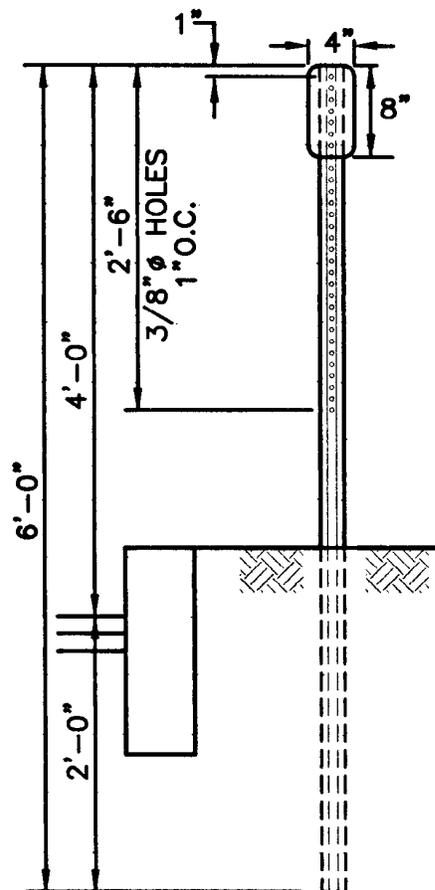




BACK TO BACK



SINGLE MOUNTING



**NOTES:**

1. SHALL BE IN ACCORDANCE WITH SECTION T.18 OF THE R.I. STANDARD SPECIFICATIONS.
2. INSTALLATION SHALL CONFORM TO THE LATEST EDITION OF THE MUTCD.
3. MOUNT WITH 3/16" ALUMINUM DRAW RIVETS AND WASHERS OR 1/4" ALUMINUM CARRIAGE BOLTS AND WAHERS.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

LIGHTWEIGHT STEEL DELINEATOR MOUNTING DETAIL

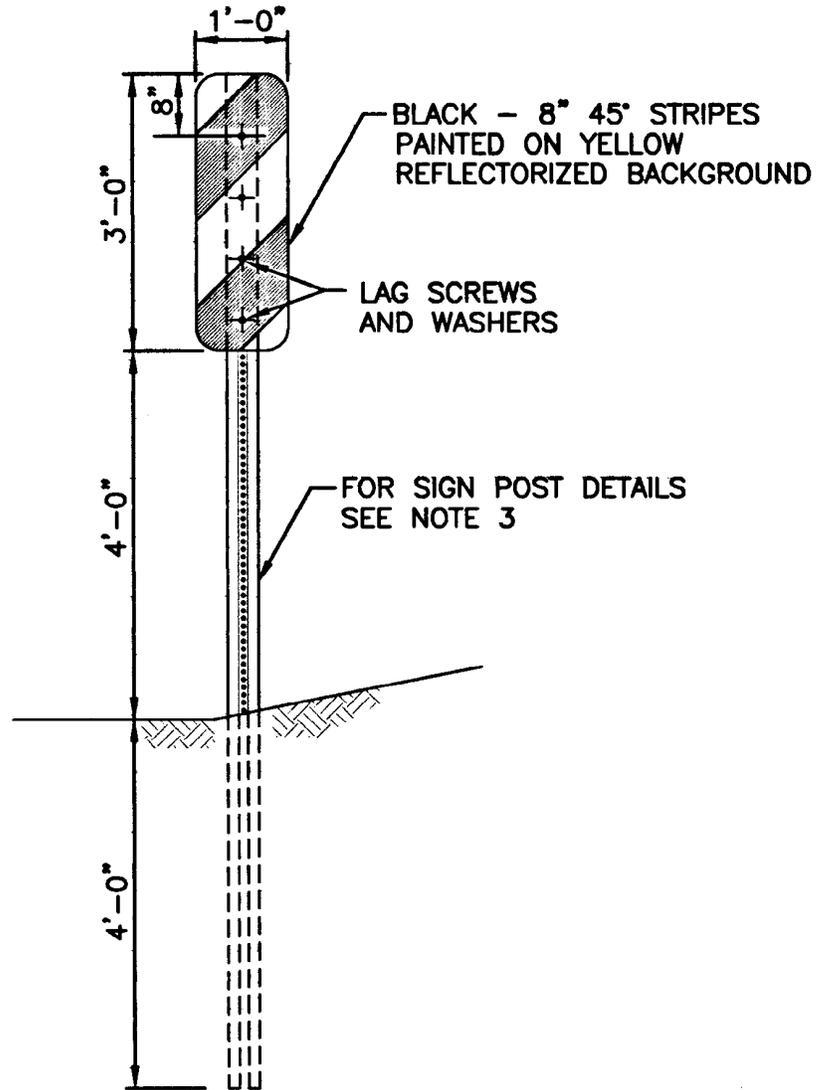
REVISIONS		
NO.	BY	DATE

*James H. Casaldi*  
 CHIEF ENGINEER  
 TRANSPORTATION

*Edmund J. Parker, Jr.*  
 CHIEF DESIGN ENGINEER  
 TRANSPORTATION

JUNE 15, 1998  
 ISSUE DATE



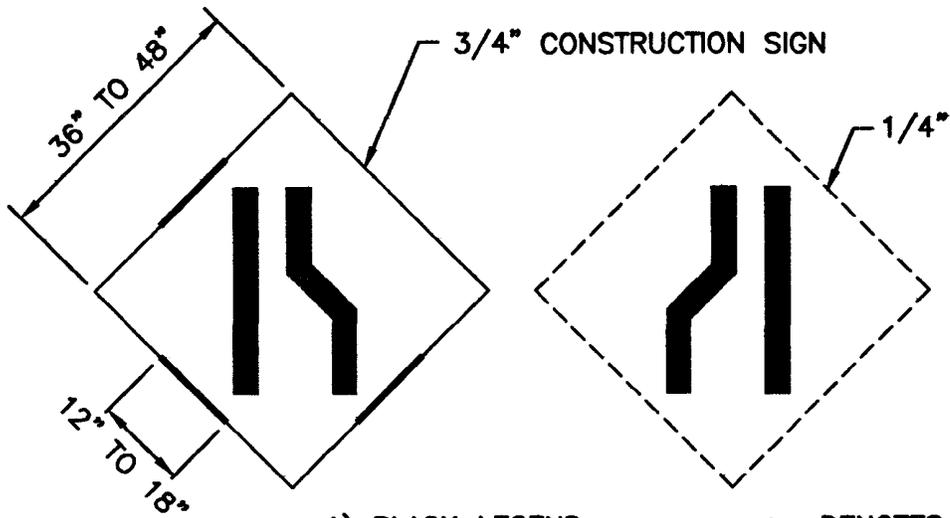
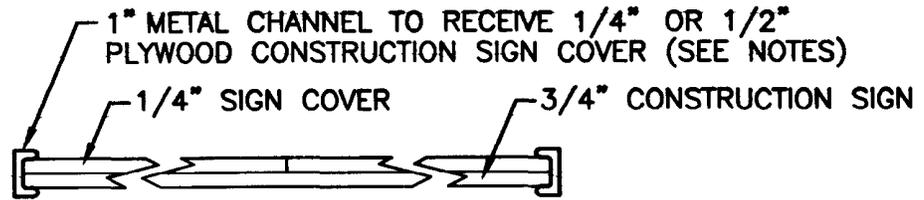


**NOTES:**

1. SHALL BE IN ACCORDANCE WITH SECTION T.18 OF THE R.I. STANDARD SPECIFICATIONS.
2. SIGN SHOWN IS FOR RIGHT BRIDGE ABUTMENT. USE OPPOSITE SIGN FOR LEFT SIDE.
3. POSTS FOR MARKERS SHALL CONFORM TO STD. 24.6.0.

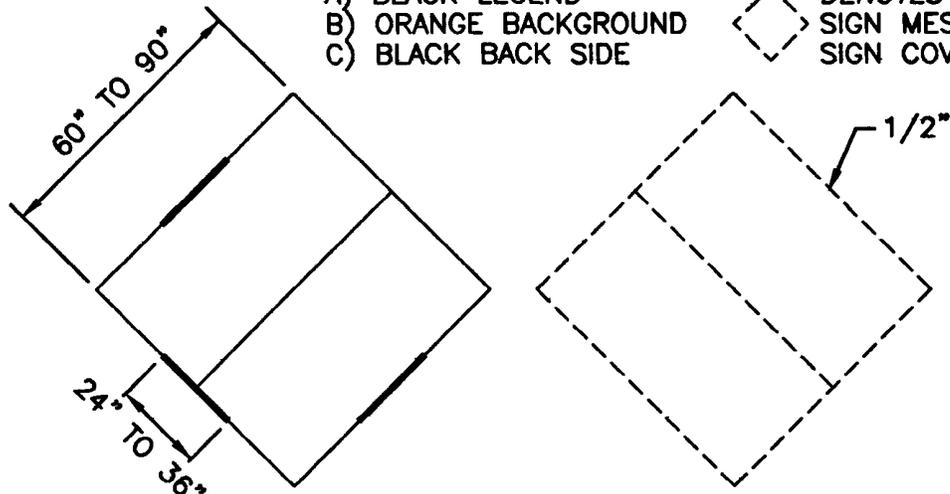
**RHODE ISLAND DEPARTMENT OF TRANSPORTATION**

REVISIONS			BRIDGE ABUTMENT MARKER MOUNTING DETAIL	R.I. STANDARD 24.6.4
NO.	BY	DATE		
			<i>James A. Capaldi</i> CHIEF ENGINEER TRANSPORTATION	<i>Edmund J. Parker Jr.</i> CHIEF DESIGN ENGINEER TRANSPORTATION



- A) BLACK LEGEND
- B) ORANGE BACKGROUND
- C) BLACK BACK SIDE

◇ DENOTES SECONDARY SIGN MESSAGE AND/OR SIGN COVER



**NOTES:**

1. SHALL BE IN ACCORDANCE WITH SECTION 922 OR THE R.I. STANDARD SPECIFICATIONS.
2. HARD COVER - FOR DAILY COVERING OF CONSTRUCTION SIGNS AS NEEDED OR TO CHANGE SIGN MESSAGE AS NEEDED.
3. SOFT COVER - AN ALTERNATIVE TO USING A PLYWOOD SIGN COVER WILL BE A TARP COVER (NON-TRANSPARENT) WITH GROMMETS FOR THE PURPOSE OF RECEIVING A CORD OR A ROPE TO SECURE TARP COVER TO EXISTING CONSTRUCTION SIGN FACE. TARP COVER DIMENSIONS SHALL BE AT LEAST EQUAL TO THE CONSTRUCTION SIGN DIMENSIONS. THIS SOFT COVER IS SOLELY FOR THE PURPOSE OF COVERING CONSTRUCTION SIGNS, AT NO TIME SHALL SIGN MESSAGES APPEAR ON THE FACE OF THE TARP COVERS, NOR SHALL TARP COVERS BE SECURED BY TAPING OR STAPLING TO FRONT OF SIGN.

**RHODE ISLAND DEPARTMENT OF TRANSPORTATION**

REVISIONS		
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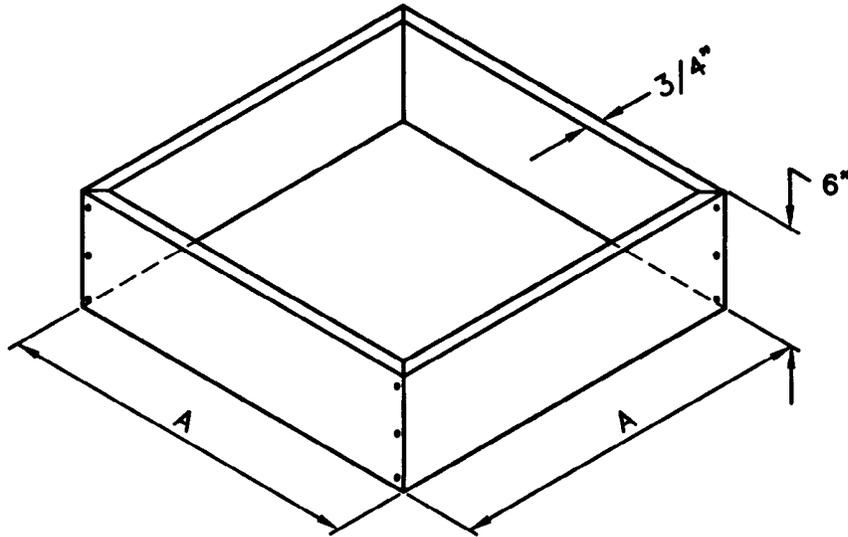
**TEMPORARY CONSTRUCTION SIGN COVER DETAIL**

*Juan A. Cignelli*  
 CHIEF ENGINEER  
 TRANSPORTATION

*Edmund J. Parker Jr.*  
 CHIEF DESIGN ENGINEER  
 TRANSPORTATION

JUNE 15, 1998  
 ISSUE DATE





**NOTES:**

1. 3/4"x6" BOARDS TO BE USED FOR FORMS FOR SIGN POST MOUNTING IN CONCRETE AND ASPHALT SIDEWALK AREAS.
2. DIMENSION "A" SHALL BE 6" LARGER THAN THE GREATER DIMENSION OF THE REQUIRED POST, BUT 8" MINIMUM.
3. AFTER INSTALLATION OF THE POST AND PROPER COMPACTION, THE HOLE SHALL BE PAVED TO MATCH THE SURROUNDING SIDEWALK.
4. THE BOX FORM SHALL BE REMOVED PRIOR TO PATCHING THE SIDEWALK AREA.
5. IN CONCRETE SIDEWALK AREAS EXPANSION JOINT MATERIAL SHALL BE PLACED BETWEEN THE NEW PATCH AND THE ADJACENT SIDEWALK AREA.

**RHODE ISLAND DEPARTMENT OF TRANSPORTATION**

REVISIONS		
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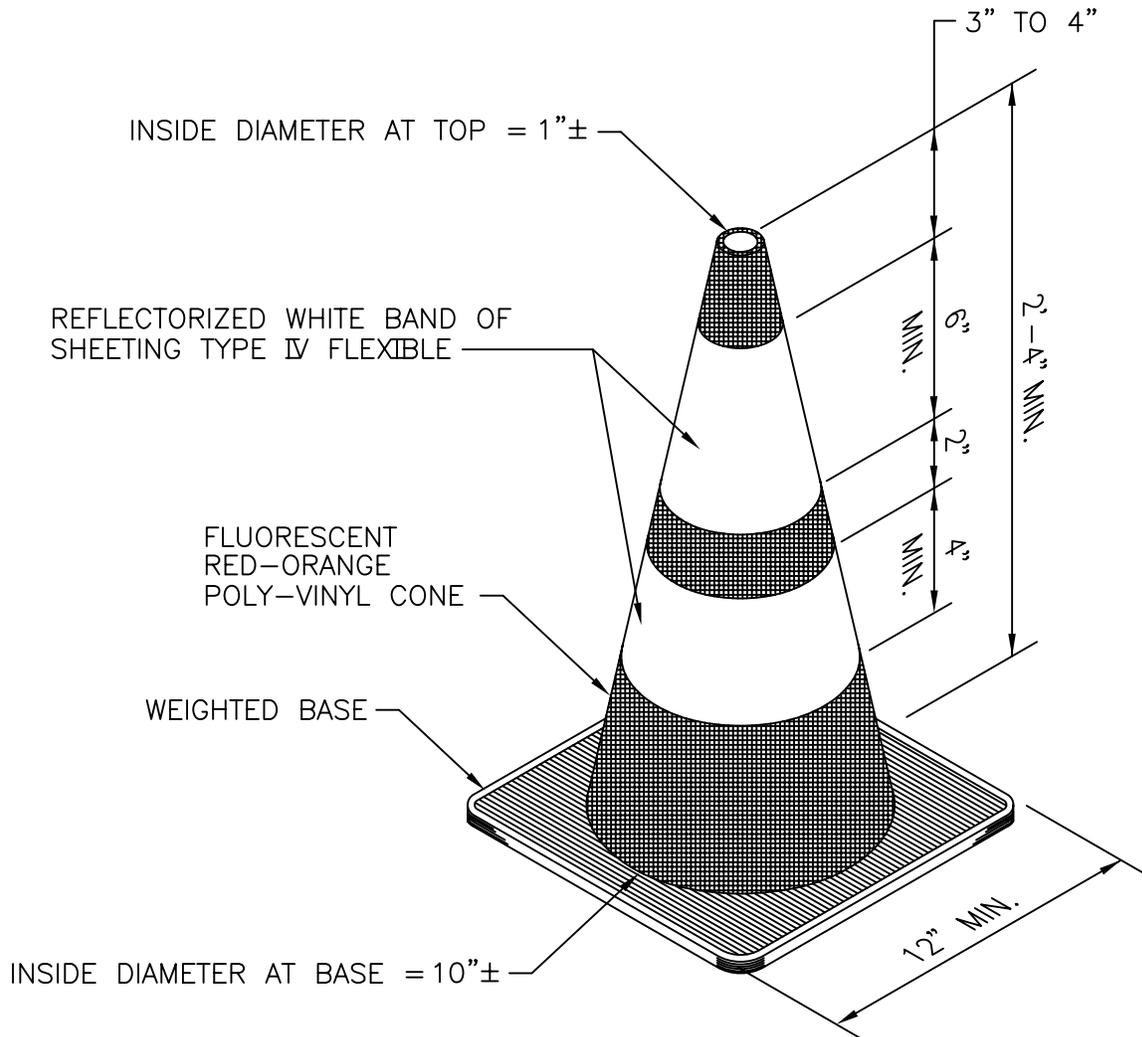
**BOX FORM**

*James H. Casabelli*  
 CHIEF ENGINEER  
 TRANSPORTATION

*Edmund J. Parker Jr.*  
 CHIEF DESIGN ENGINEER  
 TRANSPORTATION

JUNE 15, 1998  
 ISSUE DATE





**NOTES:**

1. SHALL BE IN ACCORDANCE WITH SECTION 923 OF THE R.I. STANDARD SPECIFICATIONS.
2. DIMENSIONS MAY VARY WITH MANUFACTURER'S RECOMMENDATIONS.
3. IN AREAS WHERE POSTED SPEED IS 45 MPH AND OVER ADD A 7 LB. WEIGHTED RING TO EACH CONE.

**RHODE ISLAND DEPARTMENT OF TRANSPORTATION**

REVISIONS		
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1	MLP	Mar 05

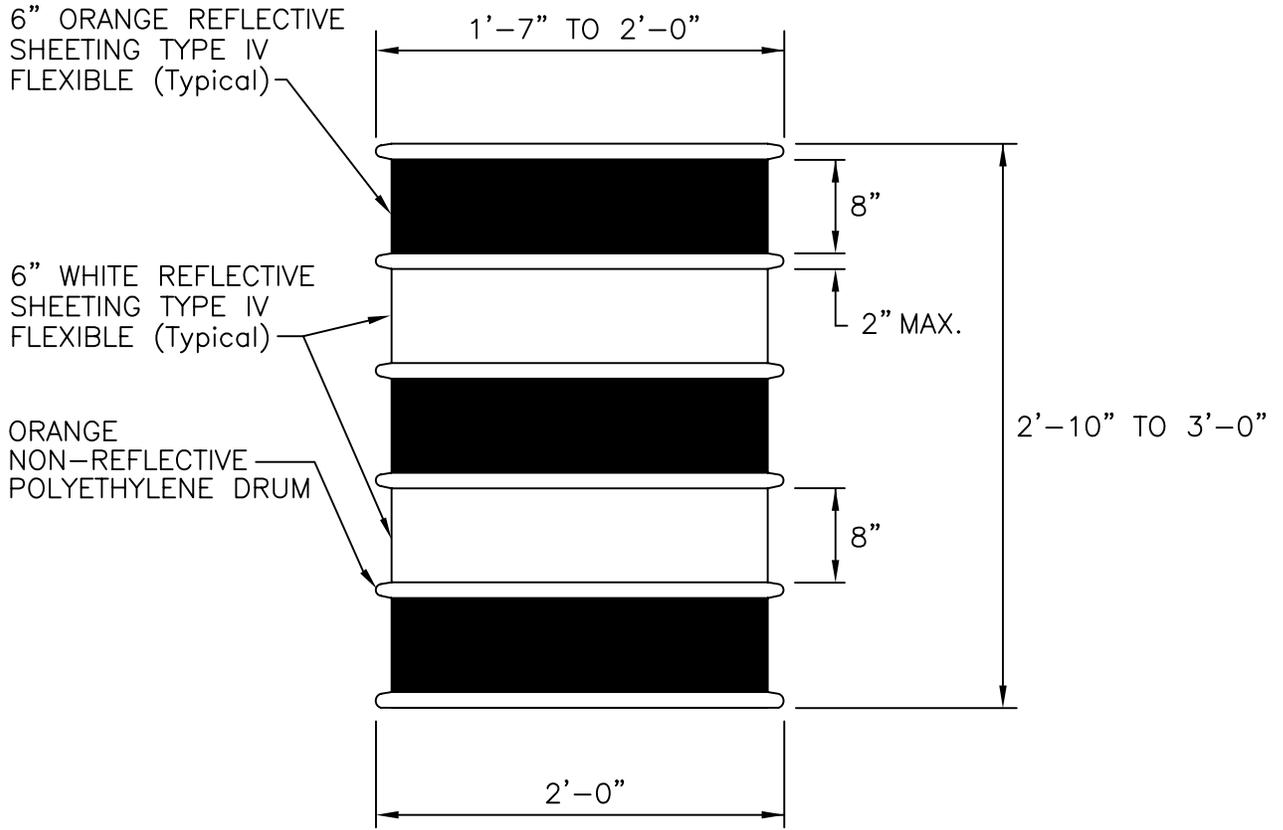
**FLUORESCENT TRAFFIC CONE**

*James A. Capaldi*  
 CHIEF ENGINEER  
 TRANSPORTATION

*Edmund J. Parker Jr.*  
 CHIEF DESIGN ENGINEER  
 TRANSPORTATION

JUNE 15, 1998  
 ISSUE DATE





**NOTES:**

1. SHALL BE IN ACCORDANCE WITH SECTION 923 OF THE R.I. STANDARD SPECIFICATIONS.
2. BASE TO BE ADAPTED FOR SANDBAG BALLAST.
3. DRUM CAN BE CYLINDRICAL OR PARTLY CYLINDRICAL WITH A FLAT SIDE.
4. DRUM SHALL BE MANUFACTURED FROM TOUGH, REBOUNDBLE PLASTIC, MADE OF HIGH DENSITY (HARD) POLYETHYLENE.

**RHODE ISLAND DEPARTMENT OF TRANSPORTATION**

REVISIONS		
NO.	BY	DATE
1	MLP	Mar 05

**POLYETHYLENE DRUM WITH MARKINGS**

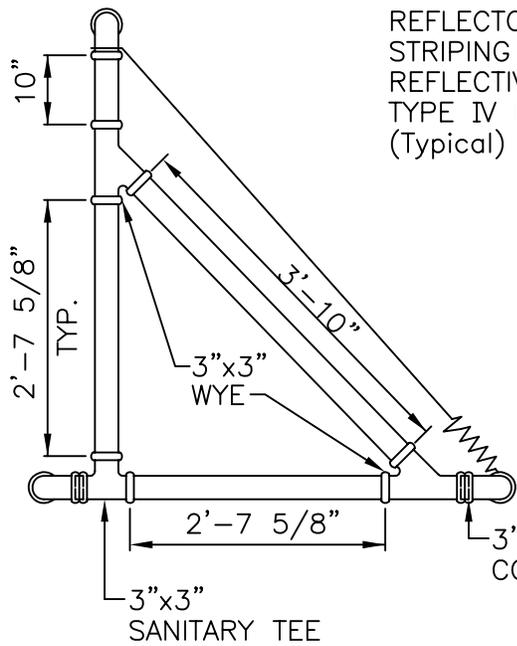
*Jama H. Casabedi*  
 CHIEF ENGINEER  
 TRANSPORTATION

*Edmund Parker Jr.*  
 CHIEF DESIGN ENGINEER  
 TRANSPORTATION

JUNE 15, 1998  
 ISSUE DATE

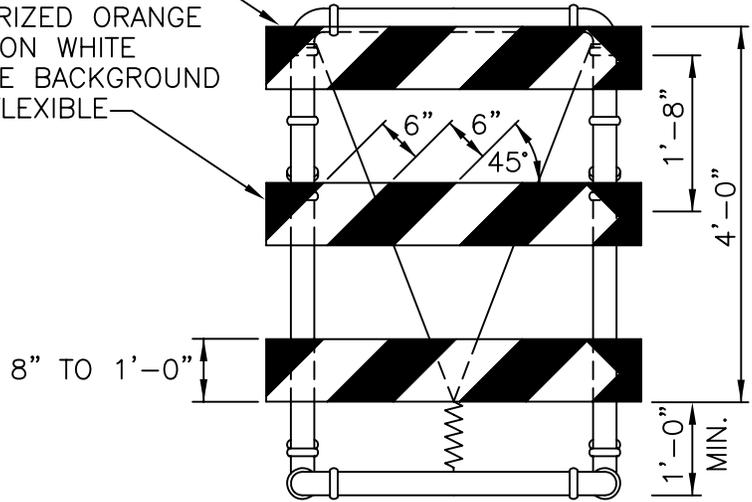


8"x48"x0.25" ANODIZED ALUMINUM PANELS WITH REFLECTORIZED BARRICADE SHEETING (SEE NOTE 8)

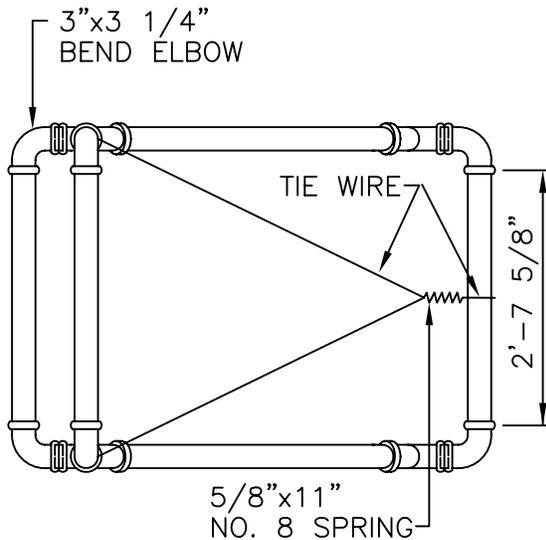


SIDE ELEVATION

REFLECTORIZED ORANGE STRIPING ON WHITE REFLECTIVE BACKGROUND TYPE IV FLEXIBLE (Typical)



FRONT ELEVATION



PLAN

NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION 923 OF THE R.I. STANDARD SPECIFICATIONS.
2. ALL PIPE SHALL BE POLYVINYL CHLORIDE (PVC) PRESSURE RATED CLASS SDR 21 OR SDR 26 CONFORMING TO ASTM D2241 OR ASTM D2729.
3. JOINT FILLINGS MAY BE PVC-ASTM D 2665 OR ACRYLONITILE BUTADIENE STYRENE (ABS) ASTM D 2661 (DRAINAGE WASTE AND VENT).
4. ALL PIPES SHALL BE WHITE. WHITE FITTINGS ARE PREFERRED, BLACK MAY BE USED.
5. ALL JOINTS SHALL BE FREE TO SEPARATE UPON VEHICLE IMPACT.
6. A FIXED FRANGIBLE PAVEMENT CONNECTION PREFERRED. SAND BAGS MAY BE SUBSTITUTED.
7. STRIPES SHALL BE SLOPED DOWNWARD IN DIRECTION OF TRAFFIC TO PASS.
8. PVC PIPE SHALL BE ULTRAVIOLET LIGHT STABILIZED.
9. ATTACH PANELS WITH 1" NO. 14 PAN HEAD METAL SCREWS.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

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1	MLP	3/1/2005

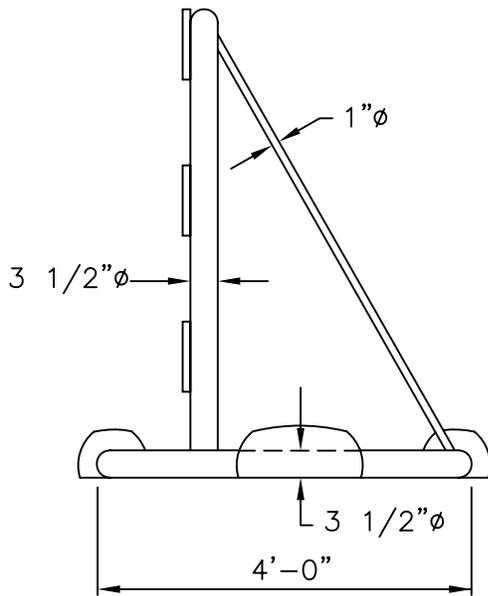
PVC PLASTIC PIPE TYPE III BARRICADE

*James A. Casaldi*  
CHIEF ENGINEER  
TRANSPORTATION

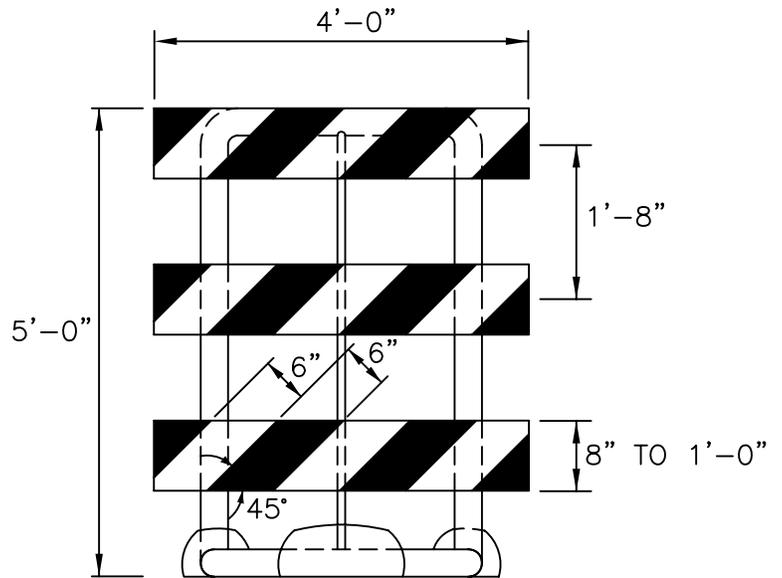
*Edmund J. Parker Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

JUNE 15, 1998  
ISSUE DATE

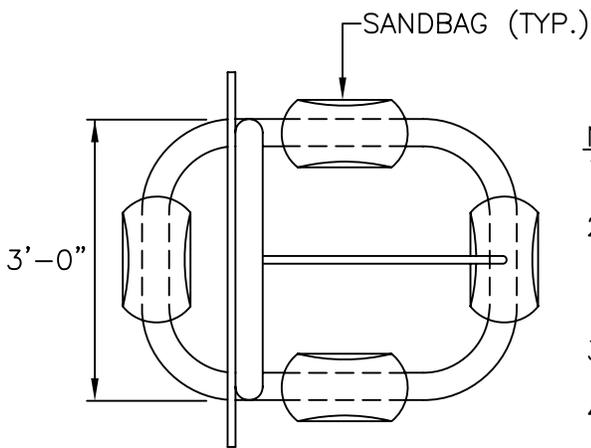




SIDE ELEVATION



FRONT ELEVATION



PLAN

NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION 923 OF THE R.I. STANDARD SPECIFICATIONS.
2. THE BASE AND UPRIGHT PIPE SHALL BE ROTATIONALLY MOLDED POLYETHYLENE PLASTIC CONFORMING TO ASTM D1248, CLASS A3-E4 OR CLASS II A4.
3. THE BRACE SHALL BE EXTRUDED POLYETHYLENE PLASTIC CONFORMING TO ASTM D1248-III A4.
4. ALL PIPE SHALL BE WHITE AND SHALL BE ULTRAVIOLET LIGHT STABILIZED.
5. ALTERNATE ORANGE AND WHITE STRIPES SHALL BE REFLECTORIZED, 6" WIDE, SLOPED DOWNWARD IN THE DIRECTION OF TRAFFIC TO PASS.
6. THE BARRICADE RAILS SHALL BE 9"x48"x0.125" PLASTIC PANELS ATTACHED WITH 1" PLASTIC RIVETS, 4 PER RAIL.
7. THIS IS AN APPROVED ALTERNATE TO STD. 26.3.0.
8. ALL SHEETING SHALL BE TYPE IV FLEXIBLE SHEETING.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
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1	MLP	3/1/2005

PLASTIC PIPE TYPE III BARRICADE

*James A. Casaldi*  
CHIEF ENGINEER  
TRANSPORTATION

*Edmund J. Parker Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

JUNE 15, 1998  
ISSUE DATE



SIGN NUMBER		* R1-1				* R1-2			R2-1			R2-4a			R2-5c		
LEGEND																	
COLOR	BACKGROUND	RED				WHITE			WHITE			WHITE			WHITE		
	COPY	WHITE				RED			BLACK			BLACK			BLACK		
SIGN DIMENSION	WIDTH	24"	30"	36"	48"	36"	48"	60"	24"	36"	48"	24"	36"	48"	24"	36"	48"
	HEIGHT	24"	30"	36"	48"	36"	48"	60"	30"	48"	60"	48"	72"	96"	30"	48"	60"

SIGN NUMBER		R3-1				R3-2			R3-3			R3-4			R3-5		
LEGEND																	
COLOR	BACKGROUND	WHITE				WHITE			WHITE			WHITE			YELLOW		
	COPY	RED (BLACK ARROW)				RED (BLACK ARROW)			BLACK			RED (BLACK ARROW)			BLACK		
SIGN DIMENSION	WIDTH	24"				24"			24"			24"			30"		
	HEIGHT	24"				24"			24"			24"			36"		

SIGN NUMBER		R3-6				R3-7 (R OR L)			R4-1			R4-2			R4-3		
LEGEND																	
COLOR	BACKGROUND	WHITE				WHITE			WHITE			WHITE			WHITE		
	COPY	BLACK				BLACK			BLACK			BLACK			BLACK		
SIGN DIMENSION	WIDTH	30"				30"			18"	24"		18"	24"		24"	36"	48"
	HEIGHT	36"				30"			24"	30"		24"	30"		30"	48"	60"

SIGN NUMBER		R4-5				R4-6			* R4-7			R4-7a			R4-7b				
LEGEND																			
COLOR	BACKGROUND	WHITE				WHITE			WHITE			WHITE			WHITE				
	COPY	BLACK				BLACK			BLACK			BLACK			BLACK				
SIGN DIMENSION	WIDTH	24"	36"	48"		24"	36"	48"	24"			18"	24"	36"	48"	18"	24"	36"	48"
	HEIGHT	30"	48"	60"		30"	48"	60"	30"			24"	30"	48"	60"	24"	30"	48"	60"

SIGN NUMBER		* R5-1				* R5-1a			R5-6			R5-10b			R6-1 (R OR L)		
LEGEND																	
COLOR	BACKGROUND	RED				RED			WHITE			WHITE			BLACK-ARROW WHITE		
	COPY	WHITE				WHITE			RED (BLACK BICYCLE)			BLACK			BLACK		
SIGN DIMENSION	WIDTH	30"	36"	48"		36"			24"			30"			36"		
	HEIGHT	30"	36"	48"		24"			24"			18"			12"		

SIGN NUMBER		R7-1				R7-2			R7-3			R7-4			R7-5		
LEGEND																	
COLOR	BACKGROUND	WHITE				WHITE			WHITE			WHITE			WHITE		
	COPY	RED				RED			RED			RED			GREEN		
SIGN DIMENSION	WIDTH	12"				12"			12"			12"			12"		
	HEIGHT	18"				18"			18"			18"			18"		

SIGN NUMBER		R8-7				R11-1			R11-2		
LEGEND											
COLOR	BACKGROUND	WHITE				WHITE			WHITE		
	COPY	BLACK				BLACK			BLACK		
SIGN DIMENSION	WIDTH	30"	36"	48"		24"	36"	48"	48"		
	HEIGHT	24"	36"	30"		48"	60"	30"			

- NOTES:
1. SHALL BE IN ACCORDANCE WITH SECTION T.15 OF THE R.I. STANDARD SPECIFICATIONS.
  2. \* DENOTES TYPE VI GRADE SHEETING.
  3. REGULATORY SIGNS SHALL BE MOUNTED IN ACCORDANCE WITH STD. 24.1.0, 24.2.0 OR 24.6.0.
  4. THICKNESS OF ALUMINUM SIGN PLATES: LESS THAN 10 SQ. FT. - 0.081 IN. 10 SQ. FT. TO 36 SQ. FT. - 0.102 IN. GREATER THAN 36 SQ. FT. - 0.125 IN.
  5. FOR ADDITIONAL SIGNS SEE THE MUTCD.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE

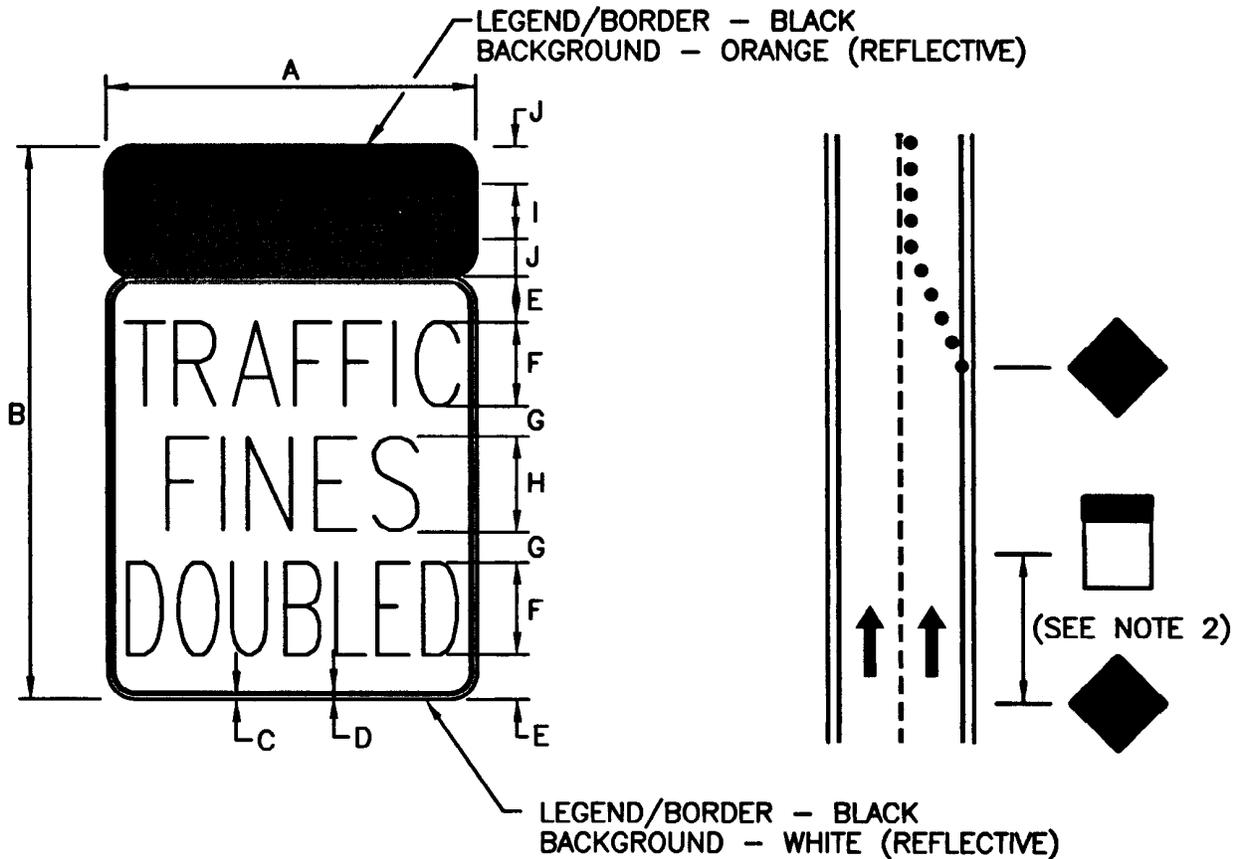
REGULATORY SIGNS

*James A. Capelli*  
 CHIEF ENGINEER  
 TRANSPORTATION

*Edward J. Parker*  
 CHIEF DESIGN ENGINEER  
 TRANSPORTATION

JUNE 15, 1998  
 ISSUE DATE





SIGN	DIMENSIONS (INCHES)									
	A	B	C	D	E	F	G	H	I	J
STANDARD	24	36	3/8	5/8	3 1/2	6B	2 1/2	6C	4C	2
RURAL	36	54	5/8	7/8	5	8B	4	8C	6C	3
EXPRESSWAY	48	72	3/4	1 1/4	7	10B	5	10C	8C	5

**NOTES:**

1. SHALL BE IN ACCORDANCE WITH SECTION T.15 OF THE R.I. STANDARD SPECIFICATIONS.
2. STANDARD: > 50'-0" < 200'-0"  
RURAL: > 200'-0" < 400'-0"  
EXPRESSWAY: > 400'-0" < 800'-0"
3. WHEN INSTALLING ON JERSEY BARRIERS LESS THAN 48" WIDE, A 36"x54" SIGN DIMENSION MAY BE USED.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
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TRAFFIC FINES IN WORK ZONE  
REGULATORY SIGN

*James H. Caselli*  
CHIEF ENGINEER  
TRANSPORTATION

*Edmund J. Parkes Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

JUNE 15, 1998  
ISSUE DATE



SIGN NUMBER		W1-1 (R OR L)			W1-2 (R OR L)			W1-3 (R OR L)			W1-4 (R OR L)			W1-5 (R OR L)			
<b>LEGEND</b>																	
COLOR	BACKGROUND	YELLOW															
	COPY	BLACK															
SIGN DIMENSION	WIDTH	30"	36"	48"	30"	36"	48"	30"	36"	48"	30"	36"	48"	24"	30"	36"	48"
	HEIGHT	30"	36"	48"	30"	36"	48"	30"	36"	48"	30"	36"	48"	24"	30"	36"	48"

SIGN NUMBER		W1-6			W1-7			W2-1			W2-2 (R OR L)			W2-3 (R OR L)			
<b>LEGEND</b>																	
COLOR	BACKGROUND	YELLOW			YELLOW			YELLOW			YELLOW			YELLOW			
	COPY	BLACK			BLACK			BLACK			BLACK			BLACK			
SIGN DIMENSION	WIDTH	48"			48"			30"	36"	48"	30"	36"	48"	24"	30"	36"	48"
	HEIGHT	24"			24"			30"	36"	48"	30"	36"	48"	24"	30"	36"	48"

SIGN NUMBER		W3-1a			W3-2a				W3-3			* W4-1			* W4-2 (R OR L)			
<b>LEGEND</b>																		
COLOR	BACKGROUND	YELLOW			YELLOW				YELLOW			YELLOW			YELLOW			
	COPY	BLACK			BLACK				BLACK			BLACK			BLACK			
SIGN DIMENSION	WIDTH	30"	36"	48"	30"	36"	48"	96"	30"	36"	48"	30"	36"	48"	30"	36"	48"	
	HEIGHT	30"	36"	48"	30"	36"	48"	96"	30"	36"	48"	30"	36"	48"	30"	36"	48"	

SIGN NUMBER		W6-1			W6-2			W6-3			W7-1			W8-5			
<b>LEGEND</b>																	
COLOR	BACKGROUND	YELLOW															
	COPY	BLACK															
SIGN DIMENSION	WIDTH	30"	36"	48"	30"	36"	48"	30"	36"	48"	30"	36"	48"	30"	36"	48"	
	HEIGHT	30"	36"	48"	30"	36"	48"	30"	36"	48"	30"	36"	48"	30"	36"	48"	

SIGN NUMBER		* W10-1			W11A-2			W11-2			W11-3			W12-1		
<b>LEGEND</b>																
COLOR	BACKGROUND	YELLOW			YELLOW			YELLOW			YELLOW			YELLOW		
	COPY	BLACK			BLACK			BLACK			BLACK			BLACK		
SIGN DIMENSION	WIDTH	36" DIA.			30"	36"	48"	30"	36"	48"	30"	36"	48"	24"	30"	36"
	HEIGHT	36" DIA.			30"	36"	48"	30"	36"	48"	30"	36"	48"	24"	30"	36"

SIGN NUMBER		W13-1		W13-2			W13-3			W14-1			W14-3	
<b>LEGEND</b>														
COLOR	BACKGROUND	YELLOW		YELLOW			YELLOW			YELLOW			YELLOW	
	COPY	BLACK		BLACK			BLACK			BLACK			BLACK	
SIGN DIMENSION	WIDTH	18"	24"	24"	36"	48"	24"	36"	48"	24"	30"	36"	48"	
	HEIGHT	18"	24"	30"	48"	60"	30"	48"	60"	24"	30"	36"	36"	

SIGN NUMBER		* HAZARD MARKER				S1-1			S2-1			* E5-1 (R OR L)			* E5-1a (R OR L)		
<b>LEGEND</b>																	
COLOR	BACKGROUND	YELLOW				YELLOW			YELLOW			GREEN			GREEN		
	COPY	BLACK				BLACK			BLACK			WHITE			WHITE		
SIGN DIMENSION	WIDTH	24"	30"	36"	48"	30"	36"	48"	30"	36"	48"	72"	72" (90" WITH 3 DIGITS)				
	HEIGHT	24"	30"	36"	48"	30"	36"	48"	30"	36"	48"	60"	60"				

- NOTES:
1. SHALL BE IN ACCORDANCE WITH SECTION T.15 OF THE R.I. STANDARD SPECIFICATIONS.
  2. \* DENOTES TYPE XI GRADE SHEETING, IF USED WITHIN WORK ZONE USE TYPE X SHEETING.
  3. WARNING SIGNS SHALL BE MOUNTED IN ACCORDANCE WITH STD. 24.1.0, 24.2.0 OR 24.6.4.
  4. FOR ADDITIONAL SIGNS SEE THE MUTCD.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE

WARNING SIGNS

*James P. Capelli*  
CHIEF ENGINEER  
TRANSPORTATION

*Edward P. ...*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

JUNE 15, 1998  
ISSUE DATE



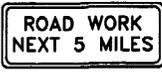
REVISIONS		
NO.	BY	DATE

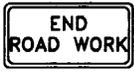
RHODE ISLAND DEPARTMENT OF TRANSPORTATION

CONSTRUCTION SIGNS

CHIEF ENGINEER  
*James H. Gault*  
 TRANSPORTATION  
 CHIEF DESIGN ENGINEER  
*Shirley A. Bickel*  
 TRANSPORTATION  
 ISSUE DATE  
 JUNE 15, 1998

SIGN NUMBER		* W21-4				W20-2				W20-3				W20-4			
LEGEND																	
		(SEE NOTE 2)				(SEE NOTE 2)				(SEE NOTE 2)				(SEE NOTE 2)			
COLOR	BACKGROUND	ORANGE								ORANGE							
	COPY	BLACK								BLACK							
DIMENSION	WIDTH	30"	36"	48"	96"	30"	36"	48"	96"	30"	36"	48"	96"	30"	36"	48"	96"
	HEIGHT	30"	36"	48"	96"	30"	36"	48"	96"	30"	36"	48"	96"	30"	36"	48"	96"

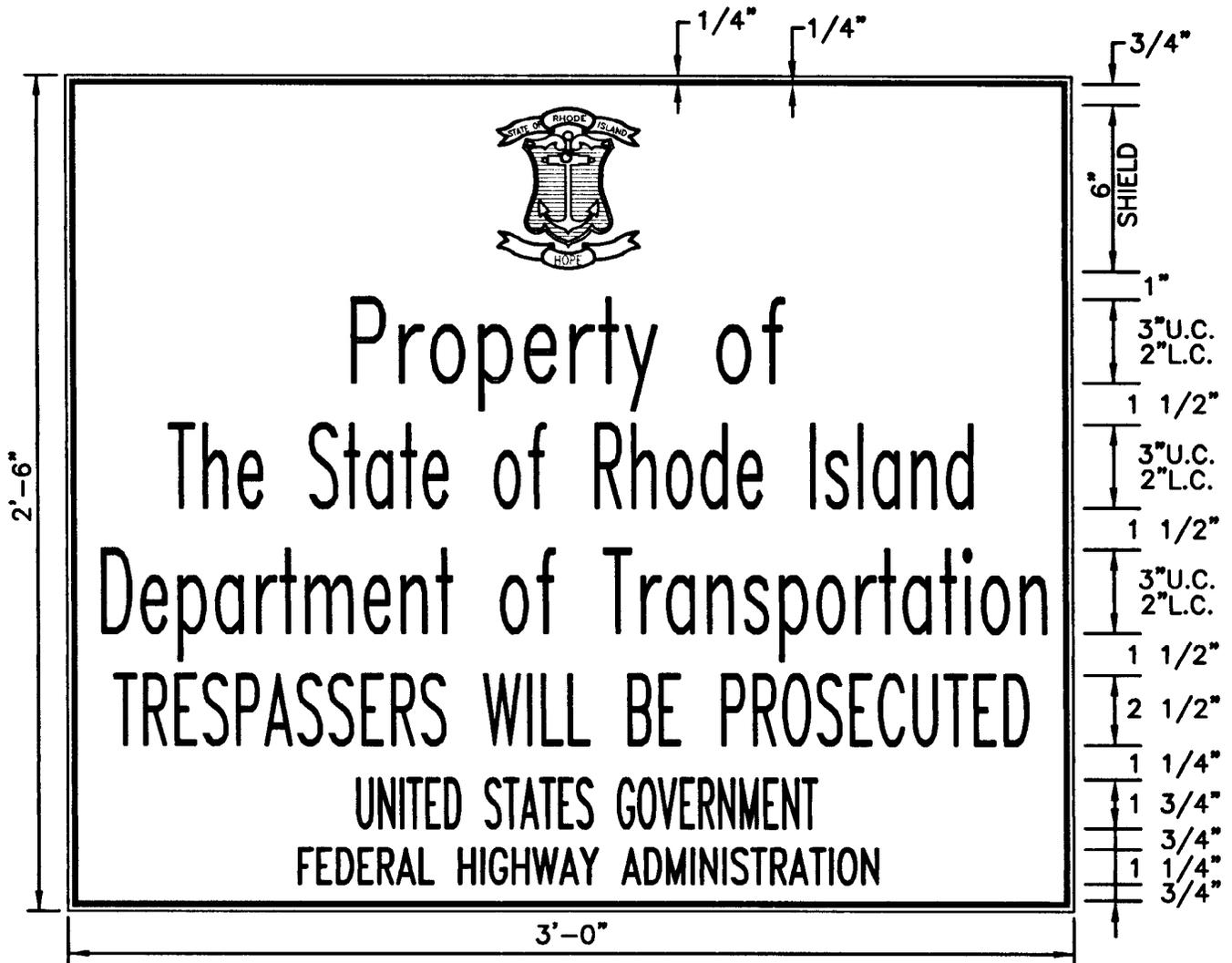
SIGN NUMBER		W20-5 (R OR L)				W20-7				W20-7a				* G20-1	
LEGEND															
		(SEE NOTE 2)				(SEE NOTE 2)				(SEE NOTE 2)				(SEE NOTE 2)	
COLOR	BACKGROUND	ORANGE								ORANGE				ORANGE	
	COPY	BLACK								BLACK				BLACK	
DIMENSION	WIDTH	30"	36"	48"	96"	30"	36"	48"	96"	30"	36"	48"	96"	60"	
	HEIGHT	30"	36"	48"	96"	30"	36"	48"	96"	30"	36"	48"	96"	24"	

SIGN NUMBER		* G20-2A	
LEGEND			
		(SEE NOTE 2)	
COLOR	BACKGROUND	ORANGE	
	COPY	BLACK	
DIMENSION	WIDTH	48"	
	HEIGHT	24"	

**NOTES:**

- SHALL BE IN ACCORDANCE WITH SECTION 922 OF THE R.I. STANDARD SPECIFICATIONS.
- LEGEND ON W20-SERIES SHALL INDICATE DISTANCE AS FOLLOWS:
  - 1500 FT 1/2 MILE
  - 1000 FT 1 MILE
  - 500 FT AHEAD
- EXAMPLE: W20-2a = DETOUR 1500 FT
- \* DENOTES TYPE V GRADE SHEETING.
- CONSTRUCTION SIGNS SHALL BE MOUNTED IN ACCORDANCE WITH STD. 24.1.0, 24.2.0 OR 24.3.0.
- FOR ADDITIONAL SIGNS SEE THE MUTCD.

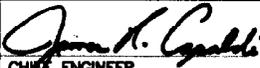




**NOTES:**

1. SHALL BE IN ACCORDANCE WITH SECTION 922 OF THE R.I. STANDARD SPECIFICATIONS.
2. SIGN SHALL BE 3/4" EXTERIOR MARINE PLYWOOD OR ALUMINUM (THICKNESS = 0.081").
3. SIGN SHALL HAVE A WHITE REFLECTORIZED BACKGROUND WITH A BLUE LEGEND AND LIGHT BLUE STATE SEAL.

**RHODE ISLAND DEPARTMENT OF TRANSPORTATION**

REVISIONS			FIELD OFFICE IDENTIFICATION SIGN	
NO.	BY	DATE		
			 CHIEF ENGINEER TRANSPORTATION	 CHIEF DESIGN ENGINEER TRANSPORTATION

SIGN NUMBER		M1-1			M1-4			M1-5 (SEE NOTE 1)		M2-1	
<b>LEGEND</b>											
COLOR	BACKGROUND	STANDARD INTERSTATE COLORS			STANDARD INTERSTATE COLORS			BLACK-WHITE SHIELD		WHITE	WHITE
	COPY	WHITE			WHITE			BLACK		BLACK	BLACK
DIMENSION	WIDTH	24"	36"	48"	30"	45"	60"	24"	24"	30"	21"
	HEIGHT	24"	36"	48"	24"	36"	48"	24"	24"	24"	15"

SIGN NUMBER		M3-1,2,3,4 (SEE NOTE 3)				M4-5				M4-6		M4-8,9R		M4-10 (R OR L)	
<b>LEGEND</b>															
COLOR	BACKGROUND	STATE		INTERSTATE		STATE		INTERSTATE		WHITE		ORANGE		BLACK	
	COPY	WHITE		BLUE		BLACK		WHITE		BLACK		BLACK		BLACK (ORANGE ARROW)	
DIMENSION	WIDTH	24"	30"	24"	30"	24"	30"	24"	30"	24"	30"	24"	30"	48"	
	HEIGHT	12"	15"	12"	15"	12"	15"	12"	15"	12"	15"	12"	24"	18"	

SIGN NUMBER		M5-1 (R OR L)		M5-2 (R OR L)		M5-1 (R OR L)		M5-2 (R OR L)		M6-1	
<b>LEGEND</b>											
COLOR	BACKGROUND	WHITE		WHITE		BLUE		BLUE		WHITE	
	COPY	BLACK		BLACK		WHITE		WHITE		BLACK	
DIMENSION	WIDTH	21"		21"		21"		21"		21"	
	HEIGHT	15"		15"		15"		15"		15"	

SIGN NUMBER		M6-2 (R OR L)		M6-3		M6-4		M6-1		M6-2 (R OR L)	
<b>LEGEND</b>											
COLOR	BACKGROUND	WHITE		WHITE		WHITE		BLUE		BLUE	
	COPY	BLACK		BLACK		BLACK		WHITE		WHITE	
DIMENSION	WIDTH	21"		21"		21"		21"		21"	
	HEIGHT	15"		15"		15"		15"		15"	

SIGN NUMBER		M6-3		M6-4		I-4		D9-2		D10-1		D10-2	
<b>LEGEND</b>													
COLOR	BACKGROUND	BLUE		WHITE		BLUE		BLUE		GREEN		GREEN	
	COPY	WHITE		BLACK		WHITE		WHITE (LETTER AND ARROW)		WHITE		WHITE	
DIMENSION	WIDTH	21"		21"		24"x24"		24"x24"		10"		10"	
	HEIGHT	15"		15"		24"x6" (PLAQUE)		24"x6" (PLAQUE)		18"		27"	

SIGN NUMBER		D10-3A		D10-4		D10-5		D11-1	
<b>LEGEND</b>									
COLOR	BACKGROUND	(SEE NOTE 2)		GREEN		GREEN		GREEN	
	COPY			WHITE		WHITE		WHITE	
DIMENSION	WIDTH	12"		12"		12"		24"x18"	
	HEIGHT	24"		36"		36"		24"x6" (PLAQUE)	

**NOTES:**

- SHALL BE IN ACCORDANCE WITH SECTIONS T.15 OF THE R.I. STANDARD SPECIFICATIONS.
- SIGN M1-5:
  - LEGEND RI SHALL BE 4" SERIES D.
  - ONE NUMERAL SHALL BE 12" SERIES E.
  - TWO OR THREE NUMERALS SHALL BE 12" SERIES D.
  - BORDER - 5/8" BLACK, 3/8" WHITE
  - RADIUS - 1 1/2"
  - POST LENGTH SHALL BE 8'-0" FOR MP SIGNS.
- M3-SERIES WIDTH SAME AS M1-SERIES WIDTH.
- D10-3A MILE TENTH'S USE 24.6.3.
- GUIDE SIGNS SHALL BE MOUNTED IN ACCORDANCE WITH STD. 24.1.0, 24.2.0, 24.6.2 OR 24.6.3.
- FOR ADDITIONAL SIGNS SEE THE MUTCD.

**RHODE ISLAND DEPARTMENT OF TRANSPORTATION**

REVISIONS		
NO.	BY	DATE

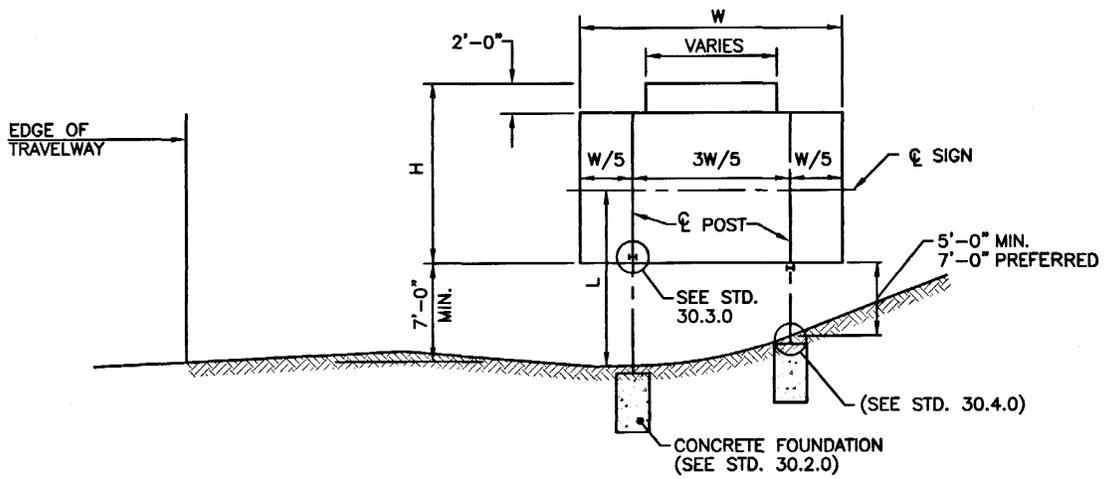
**GUIDE SIGNS**

*John A. Capaldi*  
CHIEF ENGINEER  
TRANSPORTATION

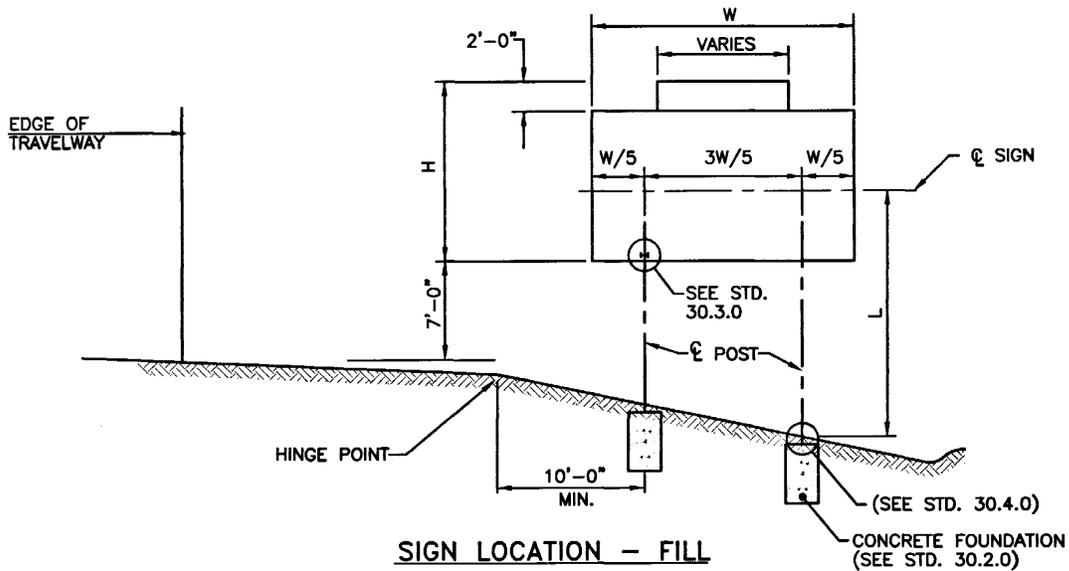
*Edward J. Park*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

JUNE 15, 1998  
ISSUE DATE





**SIGN LOCATION - CUT**



**SIGN LOCATION - FILL**

DETERMINE REQUIRED VALUES OF: W = MAXIMUM WIDTH OF SIGN  
 H = MAXIMUM HEIGHT OF SIGN  
 L = MAXIMUM DISTANCE BETWEEN TOP OF FOOTING AND CENTER LINE OF SIGN

ENTER THE POST SELECTION TABLE WITH MAXIMUM VALUE OF "L" AND  
 REQUIRED VALUES OF "W" AND "H" FOR SELECTION OF POST SIGN.  
 FOR SIGN SIZES BETWEEN THOSE VALUES OF "W", "H" AND "L"  
 IN THE TABLE, USE NEXT HIGHER FOOT VALUE.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

**SIGN LOCATION DETAILS  
 (SIGNS 6'-0"Wx4'-0"H AND GREATER)**

REVISIONS		
NO.	BY	DATE

*James A. Capaldi*  
 CHIEF ENGINEER  
 TRANSPORTATION

*Edward J. Parker, Jr.*  
 CHIEF DESIGN ENGINEER  
 TRANSPORTATION

JUNE 15, 1998  
 ISSUE DATE



**POST ASSEMBLY TABLE FOR BREAKAWAY SIGNS  
80 MPH WIND - 2 POST- ASTM A36 STEEL**

W (FT.)	L (FT.)	HEIGHT OF SIGN "H" (FT.)															
		4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	
6	6	W6X9	W6X9	W6X9	W6X9	W6X9	W6X9	W6X9	W6X9	W6X12	W6X12	W6X12	W8X18	W10X22	W10X22		
	8	W6X9	W6X9	W6X9	W6X9	W6X9	W6X9	W6X9	W6X9	W6X12	W6X12	W6X12	W8X18	W10X22	W10X22	W10X22	
	10	W6X9	W6X9	W6X9	W6X9	W6X9	W6X9	W6X9	W6X9	W6X12	W6X12	W6X12	W8X18	W10X22	W10X22	W10X22	
	12	W6X9	W6X9	W6X9	W6X12	W8X18	W10X22	W10X22	W10X22								
	14	W6X9	W6X9	W6X12	W8X18	W10X22	W10X22	W10X22									
	20	W6X12	W6X12	W6X12	W6X12	W6X12	W6X12	W6X12	W6X12	W6X12	W6X12	W6X12	W8X18	W10X22	W10X22	W10X22	
8	6	W6X9	W6X9	W6X9	W6X9	W6X9	W6X9	W6X9	W6X9	W6X12	W6X12	W6X12	W8X18	W10X22	W10X22	W10X22	
	8	W6X9	W6X9	W6X9	W6X9	W6X9	W6X9	W6X9	W6X9	W6X12	W6X12	W6X12	W8X18	W10X22	W10X22	W10X22	
	10	W6X9	W6X9	W6X9	W6X9	W6X9	W6X9	W6X9	W6X9	W6X12	W6X12	W6X12	W8X18	W10X22	W10X22	W10X22	
	12	W6X9	W6X9	W6X12	W8X18	W10X22	W10X22	W10X22									
	14	W6X12	W6X12	W6X12	W6X12	W6X12	W6X12	W6X12	W6X12	W6X12	W6X12	W6X12	W8X18	W10X22	W10X22	W10X22	
	20	W6X12	W6X12	W6X12	W6X12	W6X12	W6X12	W6X12	W6X12	W6X12	W6X12	W6X12	W8X18	W10X22	W10X22	W10X22	
10	6	W6X9	W6X9	W6X9	W6X9	W6X9	W6X9	W6X9	W6X9	W6X12	W6X12	W6X12	W8X18	W10X22	W10X22	W10X22	
	8	W6X9	W6X9	W6X9	W6X9	W6X9	W6X9	W6X9	W6X9	W6X12	W6X12	W6X12	W8X18	W10X22	W10X22	W10X22	
	10	W6X9	W6X9	W6X9	W6X9	W6X9	W6X9	W6X9	W6X9	W6X12	W6X12	W6X12	W8X18	W10X22	W10X22	W10X22	
	12	W6X9	W6X9	W6X12	W8X18	W10X22	W10X22	W10X22									
	14	W6X12	W6X12	W6X12	W6X12	W6X12	W6X12	W6X12	W6X12	W6X12	W6X12	W6X12	W8X18	W10X22	W10X22	W10X22	
	20	W6X12	W6X12	W6X12	W6X12	W6X12	W6X12	W6X12	W6X12	W6X12	W6X12	W6X12	W8X18	W10X22	W10X22	W10X22	
12	6	W6X9	W6X9	W6X9	W6X9	W6X12	W6X12	W6X12	W6X12	W8X18	W8X18	W8X18	W10X22	W10X22	W10X22	W12X26	
	8	W6X9	W6X9	W6X9	W6X12	W6X12	W6X12	W6X12	W6X12	W8X18	W8X18	W8X18	W10X22	W10X22	W10X22	W12X26	
	10	W6X9	W6X9	W6X12	W6X12	W6X12	W6X12	W6X12	W6X12	W8X18	W8X18	W8X18	W10X22	W10X22	W10X22	W12X26	
	12	W6X9	W6X12	W8X18	W8X18	W8X18	W10X22	W10X22	W10X22	W12X26							
	14	W6X12	W6X12	W6X12	W6X12	W6X12	W6X12	W6X12	W6X12	W8X18	W8X18	W8X18	W10X22	W10X22	W10X22	W12X26	
	20	W6X12	W6X12	W6X12	W6X12	W6X12	W6X12	W6X12	W6X12	W8X18	W8X18	W8X18	W10X22	W10X22	W10X22	W12X26	
14	6	W6X9	W6X9	W6X9	W6X9	W6X12	W6X12	W6X12	W6X12	W8X18	W8X18	W8X18	W10X22	W10X22	W10X22	W14X30	
	8	W6X9	W6X9	W6X9	W6X12	W6X12	W6X12	W6X12	W6X12	W8X18	W8X18	W8X18	W10X22	W10X22	W10X22	W14X30	
	10	W6X9	W6X9	W6X12	W6X12	W6X12	W6X12	W6X12	W6X12	W8X18	W8X18	W8X18	W10X22	W10X22	W10X22	W14X30	
	12	W6X12	W6X12	W6X12	W6X12	W6X12	W6X12	W6X12	W6X12	W8X18	W8X18	W8X18	W10X22	W10X22	W10X22	W14X30	
	14	W6X12	W6X12	W6X12	W6X12	W6X12	W6X12	W6X12	W6X12	W8X18	W8X18	W8X18	W10X22	W10X22	W10X22	W14X30	
	20	W6X12	W6X12	W6X12	W6X12	W6X12	W6X12	W6X12	W6X12	W8X18	W8X18	W8X18	W10X22	W10X22	W10X22	W14X30	
16	6	W6X9	W6X9	W6X9	W6X12	W6X12	W6X12	W6X12	W6X12	W8X18	W8X18	W8X18	W10X22	W10X22	W10X22	W16X31	
	8	W6X9	W6X9	W6X12	W6X12	W6X12	W6X12	W6X12	W6X12	W8X18	W8X18	W8X18	W10X22	W10X22	W10X22	W16X31	
	10	W6X9	W6X12	W8X18	W8X18	W8X18	W10X22	W10X22	W10X22	W16X31							
	12	W6X12	W6X12	W6X12	W6X12	W6X12	W6X12	W6X12	W6X12	W8X18	W8X18	W8X18	W10X22	W10X22	W10X22	W16X31	
	14	W6X12	W6X12	W6X12	W6X12	W6X12	W6X12	W6X12	W6X12	W8X18	W8X18	W8X18	W10X22	W10X22	W10X22	W16X31	
	20	W6X12	W6X12	W6X12	W6X12	W6X12	W6X12	W6X12	W6X12	W8X18	W8X18	W8X18	W10X22	W10X22	W10X22	W16X31	
18	6	W6X9	W6X9	W6X12	W6X12	W6X12	W6X12	W6X12	W6X12	W8X18	W8X18	W8X18	W10X22	W10X22	W10X22	W18X35	
	8	W6X9	W6X12	W8X18	W8X18	W8X18	W10X22	W10X22	W10X22	W18X35							
	10	W6X9	W6X12	W8X18	W8X18	W8X18	W10X22	W10X22	W10X22	W18X35							
	12	W6X12	W6X12	W6X12	W6X12	W6X12	W6X12	W6X12	W6X12	W8X18	W8X18	W8X18	W10X22	W10X22	W10X22	W18X35	
	14	W6X12	W6X12	W6X12	W6X12	W6X12	W6X12	W6X12	W6X12	W8X18	W8X18	W8X18	W10X22	W10X22	W10X22	W18X35	
	20	W6X12	W6X12	W6X12	W6X12	W6X12	W6X12	W6X12	W6X12	W8X18	W8X18	W8X18	W10X22	W10X22	W10X22	W18X35	
20	6	W6X9	W6X9	W6X12	W6X12	W6X12	W6X12	W6X12	W6X12	W8X18	W8X18	W8X18	W10X22	W10X22	W10X22	W21X44	
	8	W6X9	W6X12	W8X18	W8X18	W8X18	W10X22	W10X22	W10X22	W21X44							
	10	W6X9	W6X12	W8X18	W8X18	W8X18	W10X22	W10X22	W10X22	W21X44							
	12	W6X12	W6X12	W6X12	W6X12	W6X12	W6X12	W6X12	W6X12	W8X18	W8X18	W8X18	W10X22	W10X22	W10X22	W21X44	
	14	W6X12	W6X12	W6X12	W6X12	W6X12	W6X12	W6X12	W6X12	W8X18	W8X18	W8X18	W10X22	W10X22	W10X22	W21X44	
	20	W6X12	W6X12	W6X12	W6X12	W6X12	W6X12	W6X12	W6X12	W8X18	W8X18	W8X18	W10X22	W10X22	W10X22	W21X44	

**RHODE ISLAND DEPARTMENT OF TRANSPORTATION**

**POST SELECTION TABLE FOR BREAKAWAY SIGNS  
(SIGNS 6'-0" W X 4'-0" H AND GREATER)**

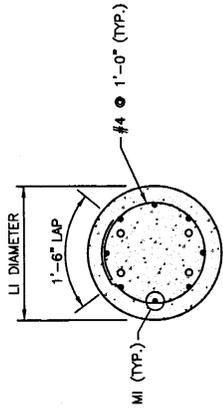
REVISIONS		
NO.	BY	DATE

*James H. Capaldi*  
CHIEF ENGINEER  
TRANSPORTATION

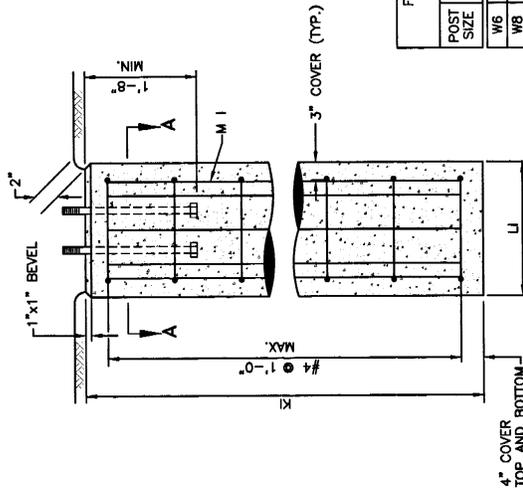
*Edmund P. ...*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

JUNE 15, 1998  
ISSUE DATE





SECTION A-A



SECTION

FOUNDATION SELECTION TABLE FOR BREAK-SAFE SIGNS			
POST SIZE	DIAMETER FEET (L1)	DEPTH FEET (K1)	REINFORCING STEEL (M1)
W6	2.0	5.50	8-#5
W8	2.5	6.00	8-#5
W10	3.0	6.75	8-#6
W12	3.0	7.50	8-#7
W14	3.0	8.00	8-#7

- NOTES:**
- CONTRACTOR SHALL DEVELOP DRAWINGS FOR THE FOUNDATION AND STRUCTURAL SUPPORTS BASED ON THE DATA INCLUDED ON THESE DETAILS.
  - FOUNDATION HOLES EXCEPT IN LEDGE, SHALL BE EXCAVATED BY THE AUGER METHOD TO THE NEAT LINES OF THE OUTSIDE DIMENSIONS OF THE FOOTINGS WITHOUT DISTURBING THE SOIL AROUND OR BELOW THE PROPOSED FOOTING.
  - IN AREAS WHERE ROCK OR LEDGE IS ENCOUNTERED, THE BOTTOM OF THE FOOTING SHALL BE PLACED TO THE DESIGN DEPTH SHOWN ON THIS SHEET. THE CONCRETE SHALL FILL THE ENTIRE VOLUME OF THE EXCAVATION TO THE FULL DEPTH OF THE FOOTING.
  - WHERE THE FOUNDATION REQUIRES A SPREAD FOOTING, IT MAY BE PLACED SEPARATELY AND THE PEDESTAL THEN BROUGHT TO GRADE. THE FOOTINGS SHALL BE DESIGNED BY A REGISTERED ENGINEER AT THE COST OF THE DESIGN AND CONSTRUCTION OF THE SPREAD FOOTING SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
  - FOR ALL FOUNDATIONS, THE SPREAD FOOTINGS SHALL BE CONFORM TO THE REQUIREMENTS OF THE R.I. STANDARD SPECIFICATIONS EXCEPT THAT NO STONE LARGER THAN 1 1/2" SHALL BE ALLOWED.
  - WHERE FOOTINGS ARE PLACED AGAINST EMBANKMENTS THE TOP 6" BELOW FINISHED GRADE SHALL BE FORMED.
  - ANCHOR BOLTS SHALL BE SET TO CONFORM WITH THE BASE-PLATE TEMPLATE AS FURNISHED IN CONFORMANCE WITH THE STANDARD PLANS.
  - THE TOP OF THE FOUNDATIONS SHALL BE PROPERLY FINISHED AND DRESSED TO ASSURE THAT FULL BEARING WILL BE PROVIDED ON THE LEVELING NUTS WHICH ARE TO BE SET IN CONCRETE. ALL EXPOSED EDGES SHALL HAVE A 1/2" CHAMFER.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

FOUNDATION DETAILS  
(SIGNS 6'-0" Wx4'-0" H AND GREATER)

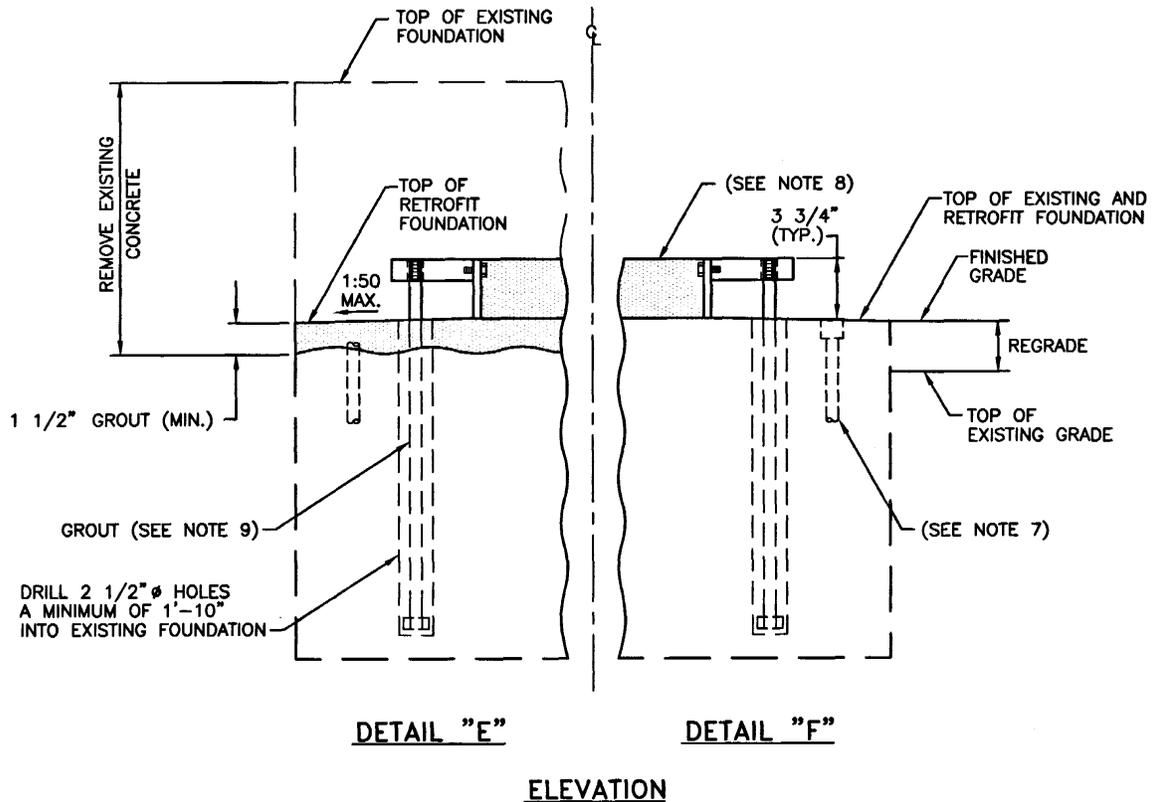
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*James L. Condit*  
REGISTERED ENGINEER  
TRANSPORTATION

*James L. Condit*  
REGISTERED ENGINEER  
TRANSPORTATION

JUNE 15, 1998  
ISSUE DATE

R.I.  
STANDARD  
30.2.0



**NOTES:**

1. FOR CONCRETE CLASS, SEE SECTION 601.01.1, TABLE 1 OF THE R.I. STANDARD SPECIFICATIONS.
2. WHEN EXISTING POST IS ATTACHED TO FOUNDATION BY ANCHOR BOLTS, REMOVE EXISTING ANCHOR BOLTS A MINIMUM OF 1" BELOW TOP OF NEW FOUNDATION. A 3 3/4" DEEP SECTION OF POST SHALL BE USED TO ATTACH THE ANCHOR PLATES. ANY UNCOATED PORTION OF THE SECTION SHALL BE PAINTED WITH AN APPROVED ZINC RICH PAINT.
3. WHEN EXISTING POST IS EMBEDDED IN A FOUNDATION, REMOVE POST APPROXIMATELY 3 3/4" ABOVE TOP OF NEW FOUNDATION, INSTALL ANCHOR PLATES AND PAINT TOP OF POST WITH AN APPROVED ZINC RICH PAINT.
4. AFTER CORRECTLY POSITIONING ANCHOR BOLTS AND ANCHOR PLATES, FILL HOLES WITH NON-SHRINK GROUT.
5. PAINT ANY EXPOSED EXISTING REINFORCING BARS WITH A ZINC RICH PAINT BEFORE APPLYING GROUT.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

FOUNDATION MODIFICATION FOR RETROFIT  
(SIGNS 6'-0"Wx4'-0"H AND GREATER)

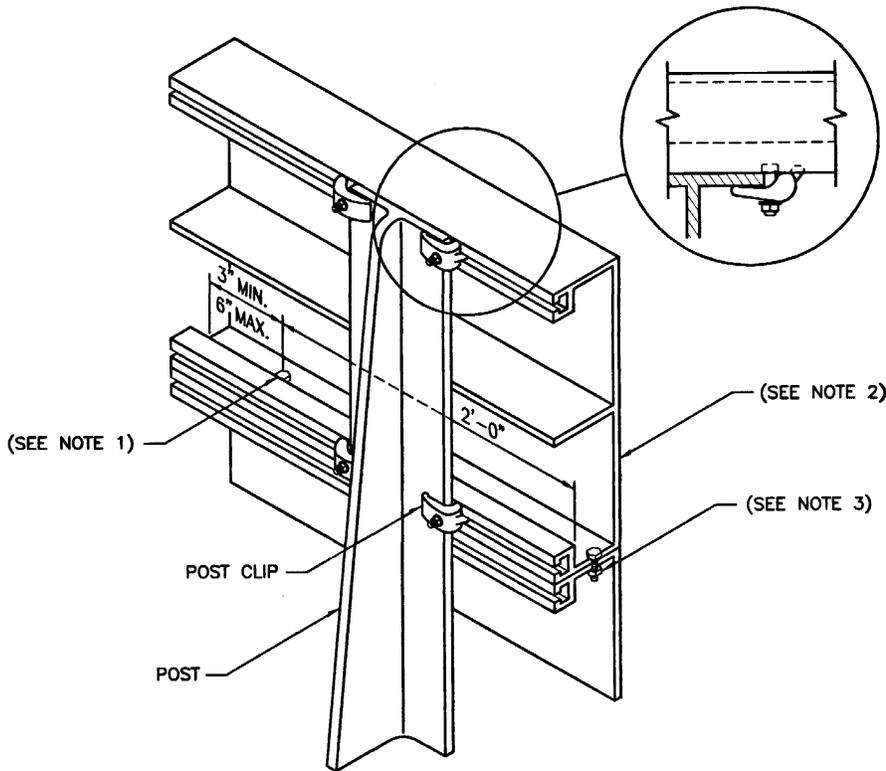
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NO.	BY	DATE

*James H. Casella*  
CHIEF ENGINEER  
TRANSPORTATION

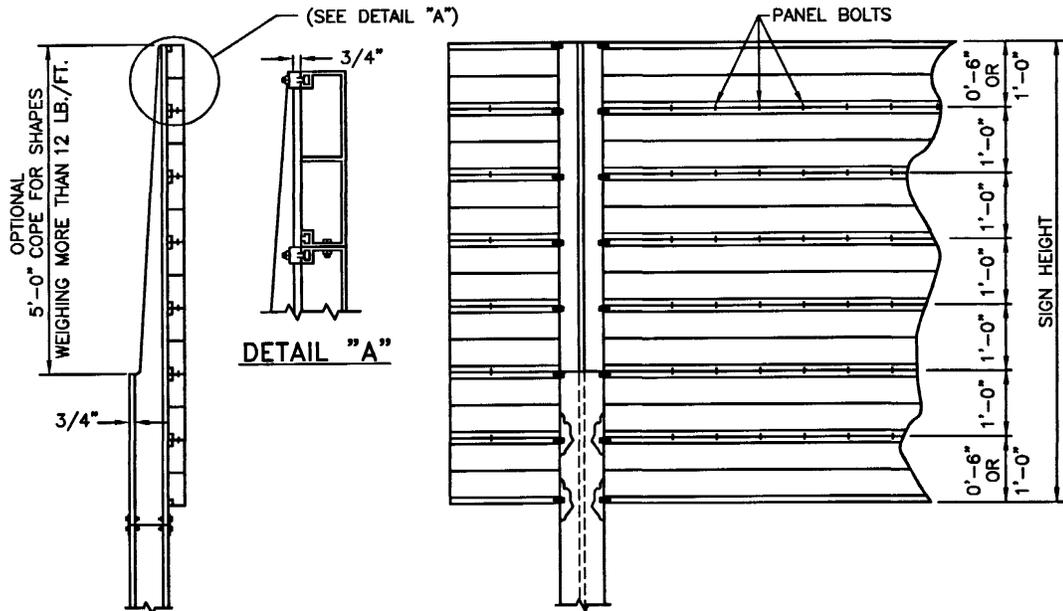
*Edmund J. Parker, Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

JUNE 15, 1998  
ISSUE DATE





**ISOMETRIC SHOWING SIGN COMPONENTS**



**REAR ELEVATION**

SHOWING ARRANGEMENT OF POST CLIPS (BOTH POSTS OR ALL POSTS) AND PANEL BOLTS

**NOTES:**

1. PANEL HEX BOLT AND WASHER ASTM-B211 ALUMINUM ALLOY 2024-T4 3/4"-16x3/4" LONG.
2. ALUMINUM SIGN PANEL (TYPE B) ALUMINUM ALLOY 6063-T6 ASTM-B221 THICKNESS 0.125".
3. PANEL HEX NUT, ALUMINUM ALLOY 6062-T9 3/8"-16 HEX. HD. NUT ASTM-B211.
4. ALL EXTRUDED ALUMINUM PANELS SHALL HAVE SIDE MOULDINGS.
5. PANEL BOLTS TO BE PLACED SYMMETRICALLY ABOUT  $\phi$  OF SIGN PANEL.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

**SIGN PANEL DETAILS  
(SIGNS 6'-0"Wx4'-0"H AND GREATER)**

REVISIONS		
NO.	BY	DATE

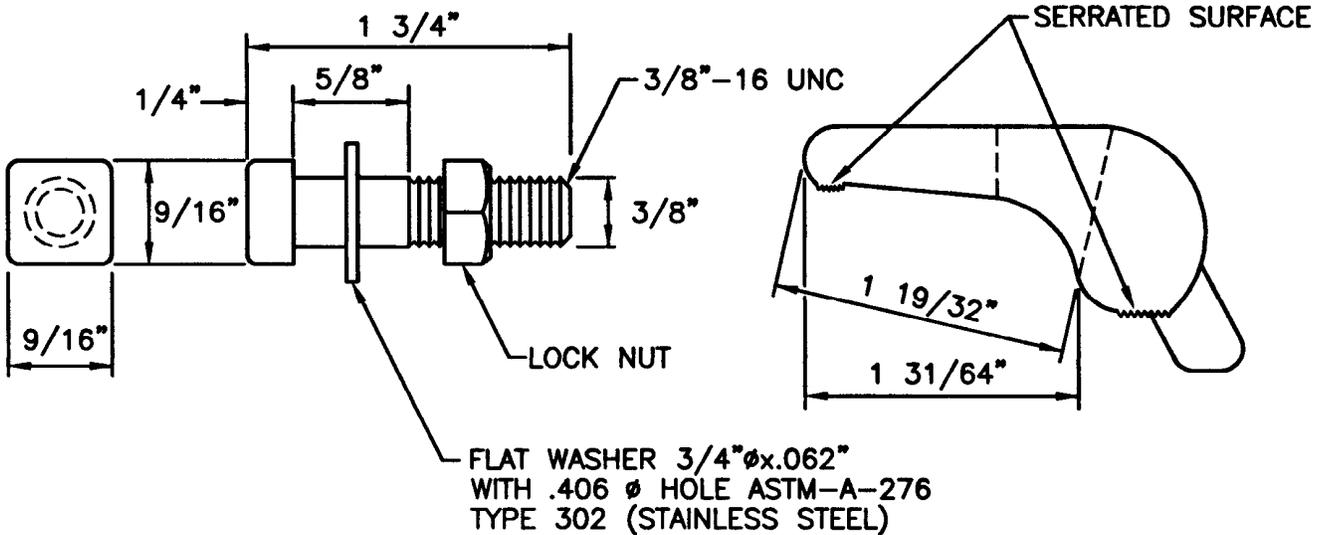
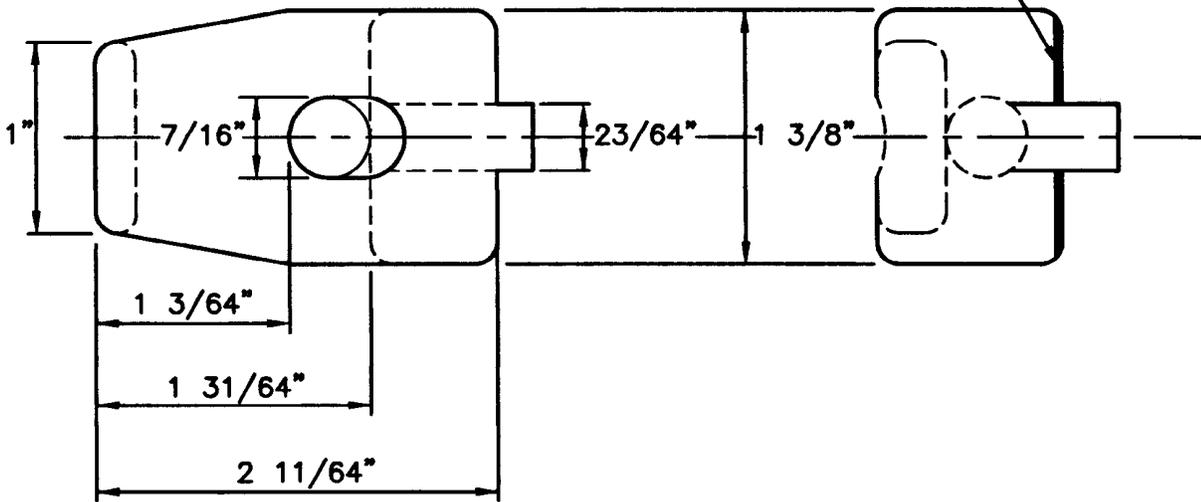
*James R. Capaldi*  
CHIEF ENGINEER  
TRANSPORTATION

*Edmund R. Parker Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

JUNE 15, 1998  
ISSUE DATE



ALUMINUM SHALL HAVE ONE COAT OF BITUMINOUS PAINT PER AASHTO SPECIFICATIONS



**NOTES:**

1. BOLT SHALL BE STAINLESS STEEL ALLOY 304 ASTM-A-193-GRADE B8 OR ASTM-A-194-GRADE 8.
2. NUT SHALL BE STAINLESS STEEL ALLOY 303 ASTM-A-193-GRADE B 8F OR OR ASTM-A-194-GRADE 8F.
3. CLIP SHALL BE ALUMINUM ALLOY 356-T6 (SG70A) ASTM-B26.

**RHODE ISLAND DEPARTMENT OF TRANSPORTATION**

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NO.	BY	DATE

**POST CLIP AND BOLT DETAIL  
(FOR EXTRUDED ALUMINUM)**

*Jean A. Capaldi*  
CHIEF ENGINEER  
TRANSPORTATION

*Edmund J. Parker*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

JUNE 15, 1998  
ISSUE DATE





BRACKET SELECTION TABLE									
POST SIZE		#1 E=.100"		#2 E=.150"		#3 E=.200"		#4 E=.250"	
		MIN. L	MAX. L						
GROUP A	6 WF 9	12'-2"	25'-0"	8'-7"	12'-1"	6'-7"	8'-6"	---	6'-6"
	6 WF 12	12'-4"	25'-0"	8'-9"	12'-3"	6'-9"	8'-8"	---	6'-8"
	6 WF 15	12'-4"		8'-9"	12'-3"	6'-9"	8'-8"	---	6'-8"
	8 WF 18	14'-1"		10'-0"	14'-0"	7'-9"	9'-11"	---	7'-8"
	8 WF 21	14'-3"		10'-2"	14'-2"	7'-11"	10'-1"	---	7'-10"
GROUP B	10 WF 22	15'-9"	25'-0"	11'-3"	15'-8"	8'-7"	11'-2"	---	8'-6"
	10 WF 26	15'-10"		11'-4"	15'-9"	8'-8"	11'-3"	---	8'-7"
	12 WF 26	17'-6"		12'-6"	17'-5"	9'-7"	12'-5"	---	9'-6"
	14 WF 30	19'-3"		13'-10"	19'-2"	10'-8"	13'-9"	---	10'-7"

BOLT CIRCLE (DIAMETER)		
GROUP A	6 WF 9	15-1/4"
	6 WF 12	15-3/8"
	6 WF 16	15-1/2"
	6 WF 20	15-1/2"
	8 WF 18	17-1/4"
	8 WF 21	17-3/8"
	8 WF 24	17-1/8"
GROUP B	10 WF 22	19-1/2"
	10 WF 26	19-5/8"
	10 WF 30	19-3/4"
	12 WF 26	21-1/2"
	12 WF 30	23-3/16"

**NOTES:**

1. SHALL MEET ALL REQUIREMENTS OF "AASHTO STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES AND TRAFFIC SIGNALS."
2. ALL HARDWARE (AMERICAN STANDARD) SUPPLIED ISHALL BE HOT DIP GALVANIZED PER ASTM A153 OR MECHANICALLY GALVANIZED PER ASTM B695.
3. FASTENERS, EXCEPT FOR SPECIAL BOLT AND COUPLING SHALL BE INSTALLED WITH LOCKWASHERS OR LOCKNUTS AND DO NOT HAVE SPECIFIC TORQUE REQUIREMENTS. FASTNERS SHOULD BE MADE AS TIGHT AS POSSIBLE WITH CONVENTIONAL WRENCHES UNLESS NOTED OTHERWISE.
4. SQUARE AND LEVEL INDIVIDUAL COMPONENTS TO MINIMIZE NEED FOR SHIMMING.
5. STRUCTURAL STEEL TO BE HOT DIP GALVANIZED PER ASTM A123 AFTER FABRICATION.
6. NO MORE THAN TWO SHIMS UNDERNEATH ANY ONE COUPLING AND NO MORE THAN THREE SHIMS UNDERNEATH ANY TWO COUPLINGS.
7. SELECT PROPER POST SIZE BY REFERRING TO POST SELECTION TABLES FOR MEDIUM AND LARGE SIGNS.

**RHODE ISLAND DEPARTMENT OF TRANSPORTATION**

REVISIONS			BRACKET SELECTION TABLE BOLT CIRCLE AND GENERAL NOTES		
NO.	BY	DATE			
			 CHIEF ENGINEER TRANSPORTATION		JUNE 15, 1998 ISSUE DATE
			 CHIEF DESIGN ENGINEER TRANSPORTATION		

## INSTALLATION NOTES:

WRENCH SIZES REQUIRED: 9/16", 7/8", 1", 1 1/16", 1 1/4", 1 7/16", 1 5/8"

## ANCHOR ASSEMBLY:

1. ASSEMBLE COUPLING ANCHORS 6A TO INSTALLATION TEMPLATE (NOT SHOWN). RIGID STEEL TEMPLATE IS RECOMMENDED.
2. LOWER ENTIRE ANCHOR ASSEMBLY INTO FRESH CONCRETE AND VIBRATE INTO POSITION SO THAT THE TOPS OF THE INDIVIDUAL ANCHORS 6A ARE FLUSH WITH THE FINISHED TOP SURFACE OF THE FOOTINGS.

## BRACKET ASSEMBLY:

1. ASSEMBLE BRACKET TO POST WITH BOLTS PROVIDED.
2. SQUARE AND TIGHTEN. (ITEMS 1, 2A, 2B, 2C, 2D, 2E, AND 2F)

## HINGE ASSEMBLY:

1. BUTT UPPER AND LOWER POSTS TOGETHER ON FLAT SURFACE.
2. PLACE HINGE PLATES 4A ON OUTER FLANGES AND SECURE WITH BOLTS 5A, 5B AND 5C. SNUG BUT DO NOT TIGHTEN.
3. MAKE SURE UPPER AND LOWER POSTS ARE IN ALIGNMENT, THEN TIGHTEN ALL NUTS 5C TO PROOF LOAD (1/2 TURN BEYOND SNUG).

## COUPLING ASSEMBLY:

1. SUSPEND POST OVER FOOTING AND INSERT SPECIAL BOLTS 3A THROUGH BRACKET 1.
2. BELOW BRACKET, THREAD COUPLINGS 3B INTO ANCHORS 6A BUT LEAVE LOOSE.
3. LOWER POST WITH SPECIAL BOLTS 3A ONTO LOOSE COUPLINGS 3B AND THREAD BOLTS INTO COUPLINGS.
4. THREAD COUPLINGS ALL THE WAY IN ANCHORS 6A.
5. TIGHTEN SPECIAL BOLTS 3A. DO NOT PLACE TORQUE ACROSS NECKED DOWN PORTION OF COUPLINGS. WRENCH FLATS ARE PROVIDED ON EITHER SIDE FOR PROPER TIGHTENING.
6. IF POST IS NOT PLUMB, INSERT SHIMS 2G AND 2H BETWEEN COUPLINGS 3B AND ANCHOR 6A.

## RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS			INSTALLATION NOTES	R.I. STANDARD 30.4.2
NO.	BY	DATE		

*James H. Casaldi*  
CHIEF ENGINEER  
TRANSPORTATION

*Edmund J. Parker Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

JUNE 15, 1998  
ISSUE DATE

REVISIONS		BILL OF MATERIALS			
NO.	BY	DATE	ITEM	DESCRIPTION	QTY./POST
			1	BRACKET 6061- T6 ALUMINUM (SEE BRACKET SELECTION TABLE)	2
			2A	BOLT BRACKET HARDWARE ASSEMBLY: GROUP A - 1/2"-13UNC x 2-1/2", HEX HEAD, ASTM A325, GALV., ASTM A153	4
				GROUP B - 5/8"-11UNC x 2-3/4", HEX HEAD, ASTM A325, GALV., ASTM A153	4
			2B	BOLT GROUP A - 1/2"-13UNC x 2-3/4", HEX HEAD, ASTM A325, GALV., ASTM A153	4
				GROUP B - 5/8"-11UNC x 3", HEX HEAD, ASTM A325, GALV., ASTM A153	4
			2C	BOLT GROUP A - 1/2"-13UNC x 3", HEX HEAD, ASTM 325, GALV., ASTM 153	4
				GROUP B - 5/8"-11UNC x 3-1/4", HEX HEAD, ASTM A325, GALV., ASTM A153	4
			2D	CAP SCREW GROUP A - 1/2"-13UNC x 1-1/4", HEX HEAD, ASTM A307, GALV., ASTM A153	4
				GROUP B - 1/2"-13UNC x 1-1/4", HEX HEAD, ASTM A307, GALV., ASTM A153	4
			2E	LOCKWASHER GROUP A - 1/2", ANSI B18-21-1, GALV., ASTM A153	16
				GROUP B - 5/8", ANSI B18-21-1, GALV., ASTM A153	16
			2F	NUT GROUP A - 1/2"-13UNC, HEAVY HEX, ASTM A563, GR. DH, GALV., ASTM A1531	2
				GROUP B - 5/8"-11UNC, HEAVY HEX, ASTM A563, GR. DH, GALV., ASTM A1531	2
			2G	SHIM GROUP A - 21" HORSESHOE, 18 GAUGE, GALV., STEEL SHEET	2
				GROUP B - 1" HORSESHOE, 18 GAUGE, GALV., STEEL SHEET	2
			2H	SHIM 1" HORSESHOE, 14 GAUGE, GALV., STEEL SHEET	2
			3A	SPECIAL BOLT COUPLING AND BOLT ASSEMBLY: 1"-8 UNC ASTM A449, GALV., ASTM A153/B695	4
			3B	COUPLING 1"-8 UNC LP., AMS 63780, GALV., ASTM A153, POLYESTER COAT **	4
			4A	HINGE PLATE HINGE ASSEMBLY: GROUP A - TYPE B525, AISI A130 STEEL, GALV., ASTM A123	4
				GROUP B - TYPE B650, AISI 4130 STEEL, GALV., ASTM A123	4
			5A	BOLT HINGE HARDWARE ASSEMBLY: 3/4"-10UNC x 2-1/4", HEX HEAD, ASTM A325, GALV., ASTM A153	8
			5B	LOCKWASHER 3/4" ANSI B18-21-1, GALV., ASTM A153	8
			5C	NUT 3/4"-10UNC, HEAVY HEX, ASTM A563, GR. DH, GALV., ASTM A153	8
			6A	ANCHOR ANCHOR ASSEMBLY: GROUP A - 1"-8UNC, 304 S.S. FERRULE, AISI 1038 ROD. AISI 1008 COIL	4
				GROUP B - 1"-8UNC, 304 S.S. FERRULE, AISI 1008 COIL	4

\*WITH EXCEPTION TO DECARBURIZATION AND MACROSTRUCTURE CLAUSES  
 \*\*2-4 MIL. THICK MORTON POWDER COATINGS' 20-7037 POLYESTER POWDER COAT

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

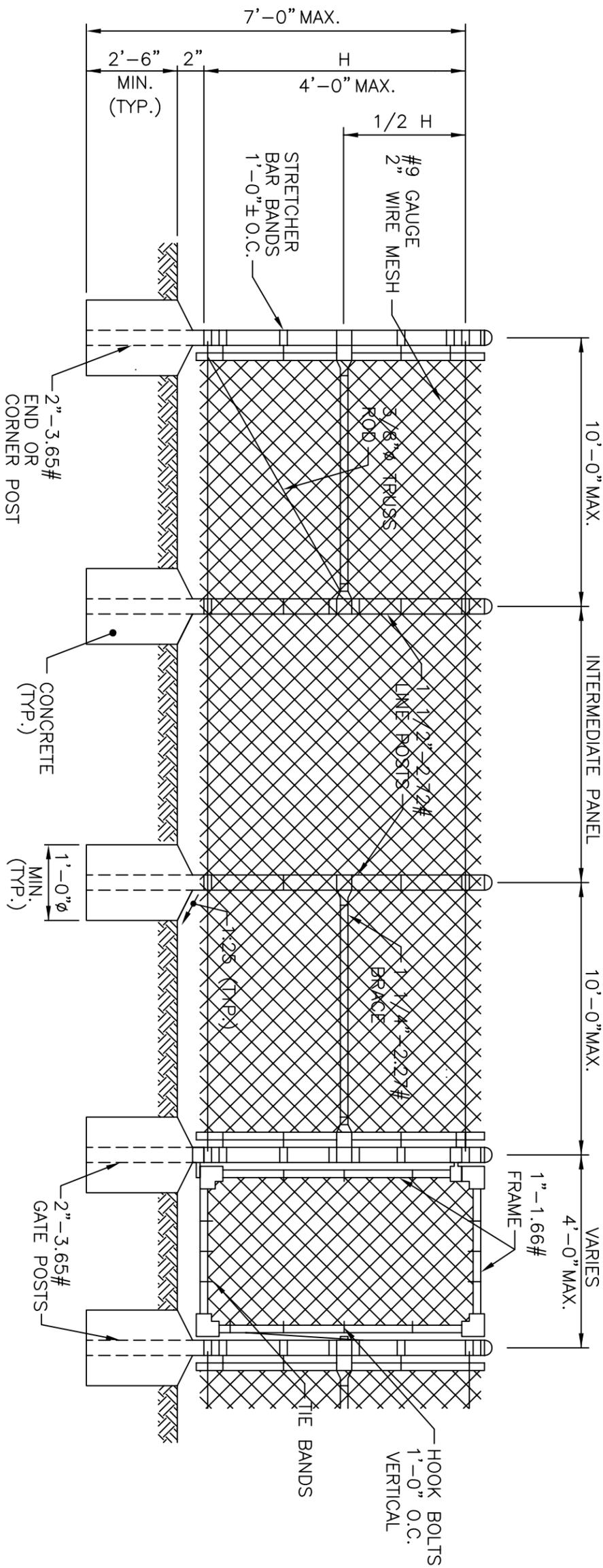
BILL OF MATERIALS

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TRANSPORTATION

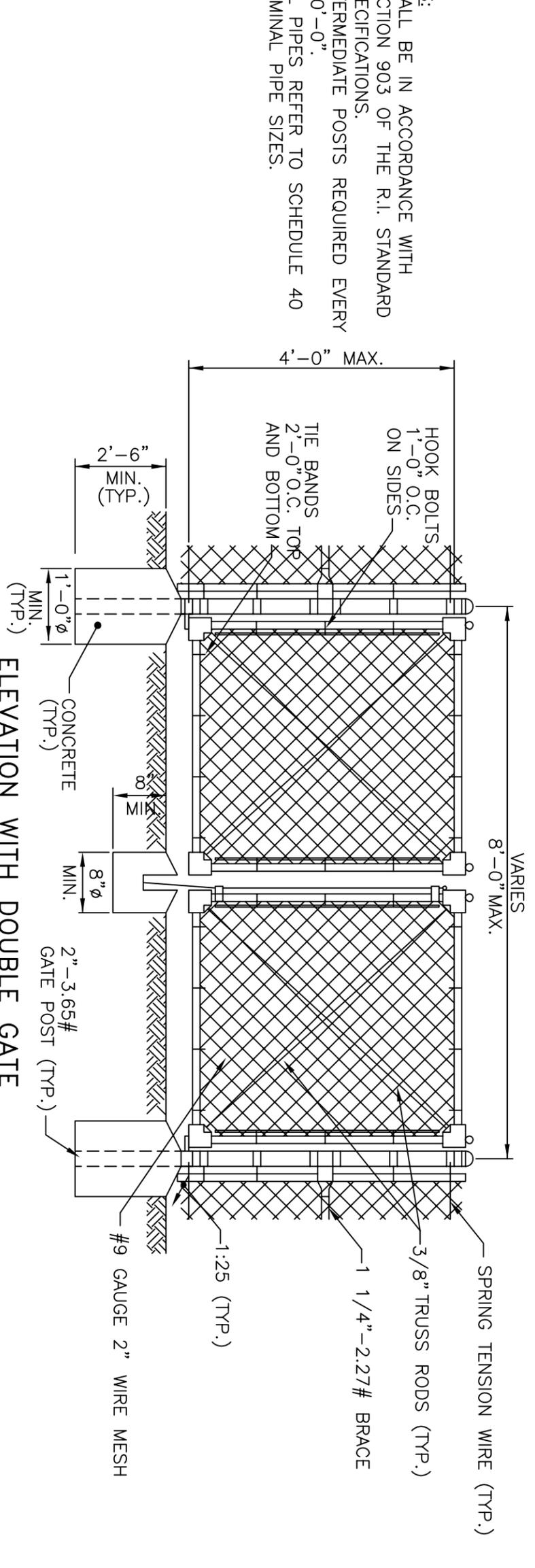
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JUNE 15, 1998  
ISSUE DATE





ELEVATION WITH SINGLE GATE



ELEVATION WITH DOUBLE GATE

- NOTES:
1. SHALL BE IN ACCORDANCE WITH SECTION 903 OF THE R.I. STANDARD SPECIFICATIONS.
  2. INTERMEDIATE POSTS REQUIRED EVERY 200'-0".
  3. ALL PIPES REFER TO SCHEDULE 40 NOMINAL PIPE SIZES.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

CHAIN LINK FENCE  
3'-0" TO 4'-0"

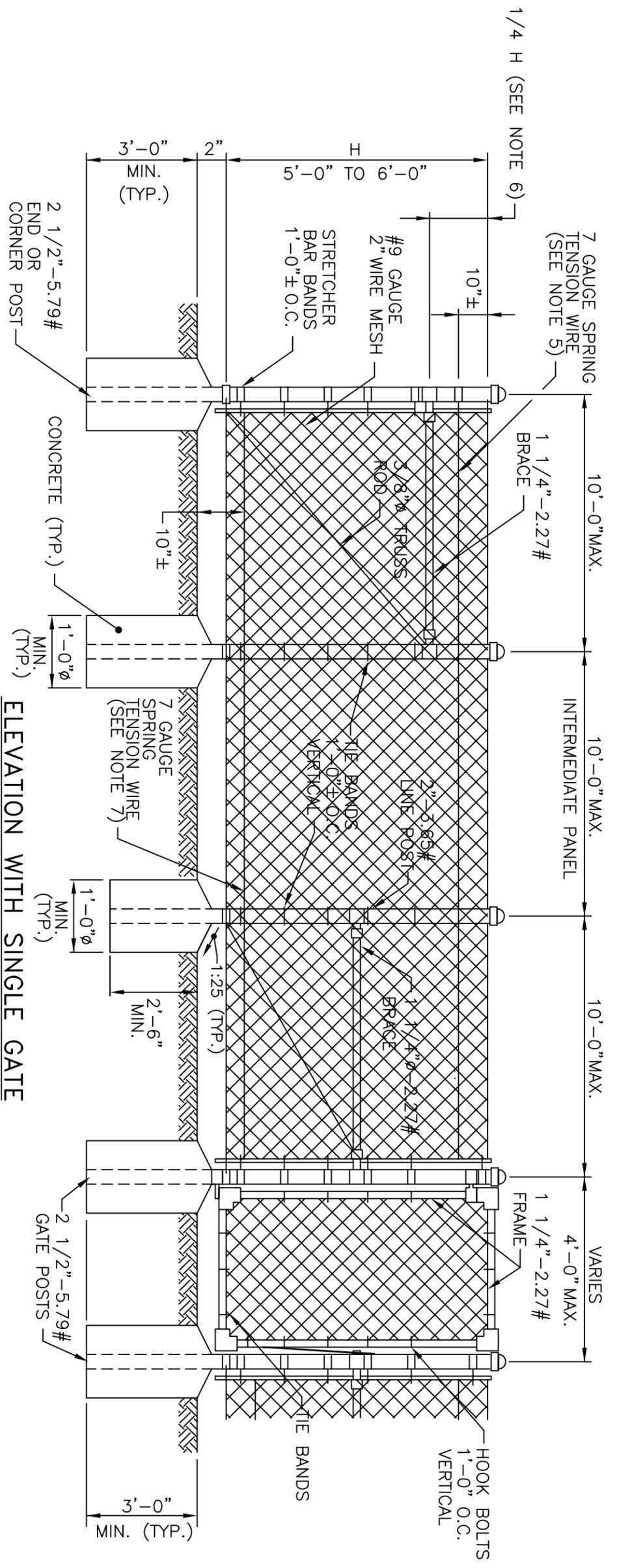
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*Edmund Parker Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

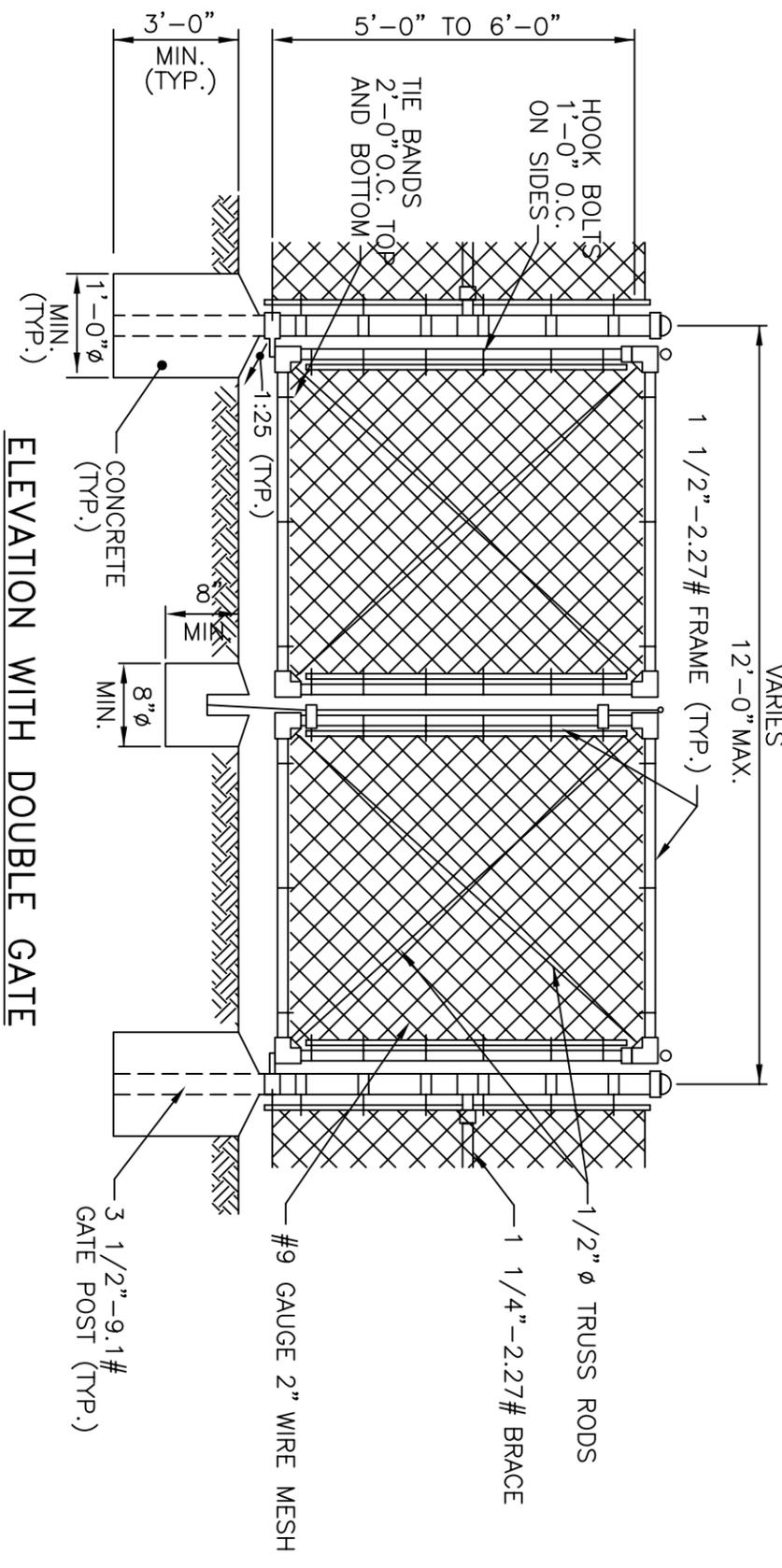
JUNE 15, 1998  
ISSUE DATE





ELEVATION WITH SINGLE GATE

- NOTES:
1. SHALL BE IN ACCORDANCE WITH SECTION 903 OF THE R.I. STANDARD SPECIFICATIONS.
  2. 6 GAUGE STREPT CLIPS TO BE USED TO FASTEN SPRING TENSION WIRE TO LINE POST.
  3. SPRING TENSION WIRE - NO. 7 GAUGE CORRUGATED HEAVILY GALVANIZED (2.0 OZ. PER SQ. FT.) ALUMINUM COATED (0.4 OZ. PER SQ. FT.)
  4. ALL PIPES REFER TO SCHEDULE 40 NOMINAL PIPE SIZES.
  5. A 1 1/4"-2.27# TOP RAIL MAY BE SUBSTITUTED FOR THE TOP TENSION WIRE WHEN THE FENCE IS NOT LOCATED IN THE CLEAR ZONE.
  6. WHEN A TOP RAIL IS USED, LOCATE THE BRACE RAIL AT 1/2 H.
  7. WHEN A TOP RAIL IS USED, DELETE THE BOTTOM SPRING TENSION WIRE.



ELEVATION WITH DOUBLE GATE

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

CHAIN LINK FENCE  
5'-0" TO 6'-0"

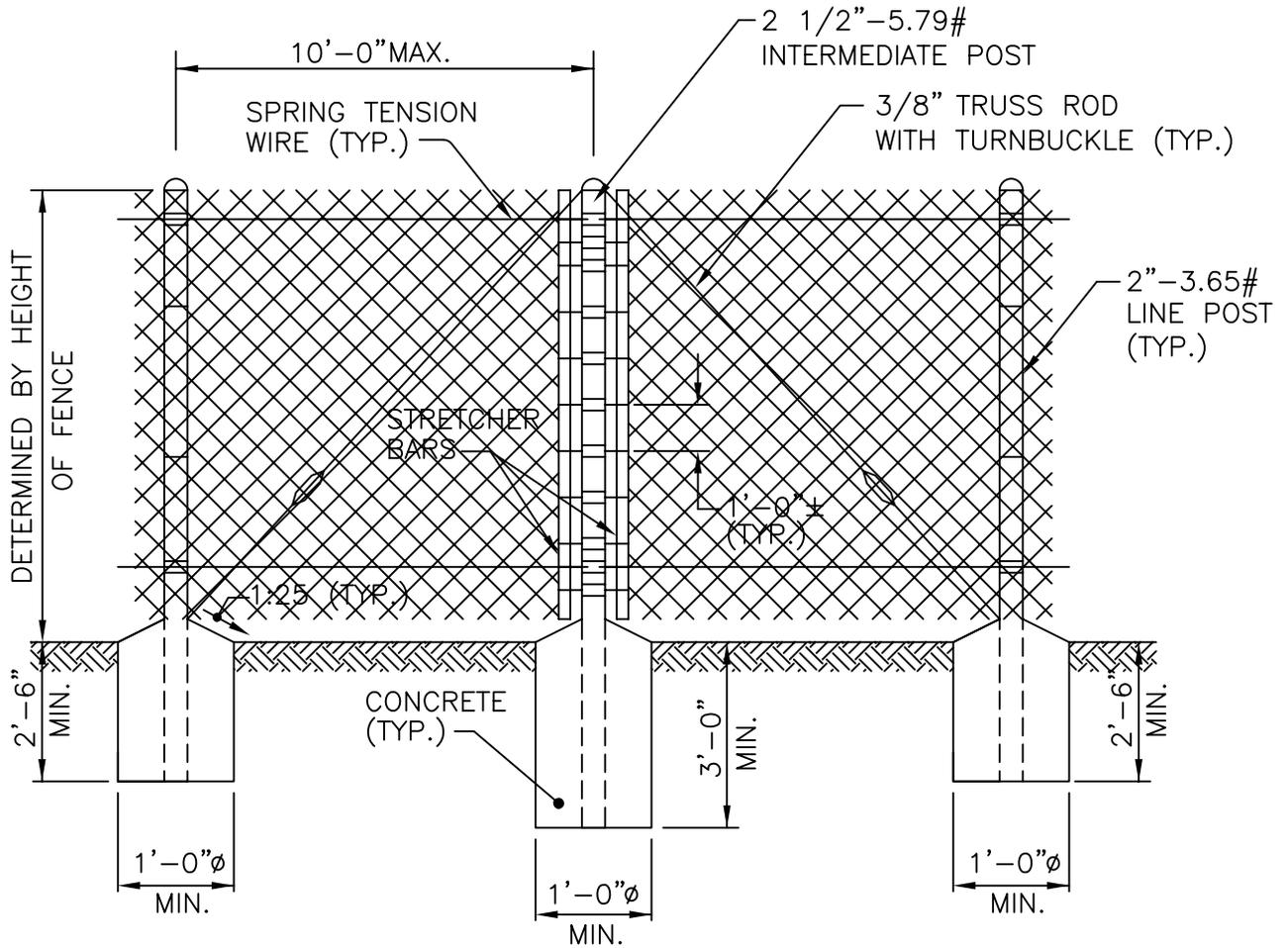


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*James H. Capaldi*  
CHIEF ENGINEER  
TRANSPORTATION

*Edmund Parker Jr*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

JUNE 15, 1998  
ISSUE DATE



**NOTES:**

1. SHALL BE IN ACCORDANCE WITH SECTION 903 OF THE R.I. STANDARD SPECIFICATIONS.
2. INTERMEDIATE POSTS REQUIRED EVERY 200'-0".
3. ALL PIPES REFER TO SCHEDULE 40 NOMINAL PIPE SIZES.

**RHODE ISLAND DEPARTMENT OF TRANSPORTATION**

**CHAIN LINK FENCE 5'-0" TO 6'-0"  
INTERMEDIATE POST**

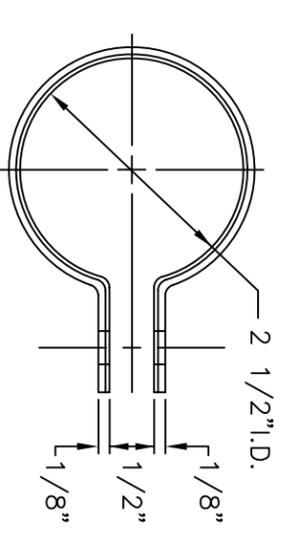
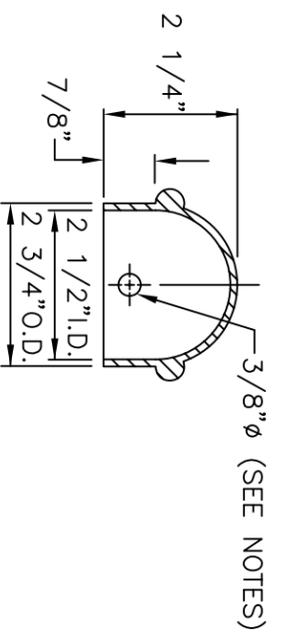
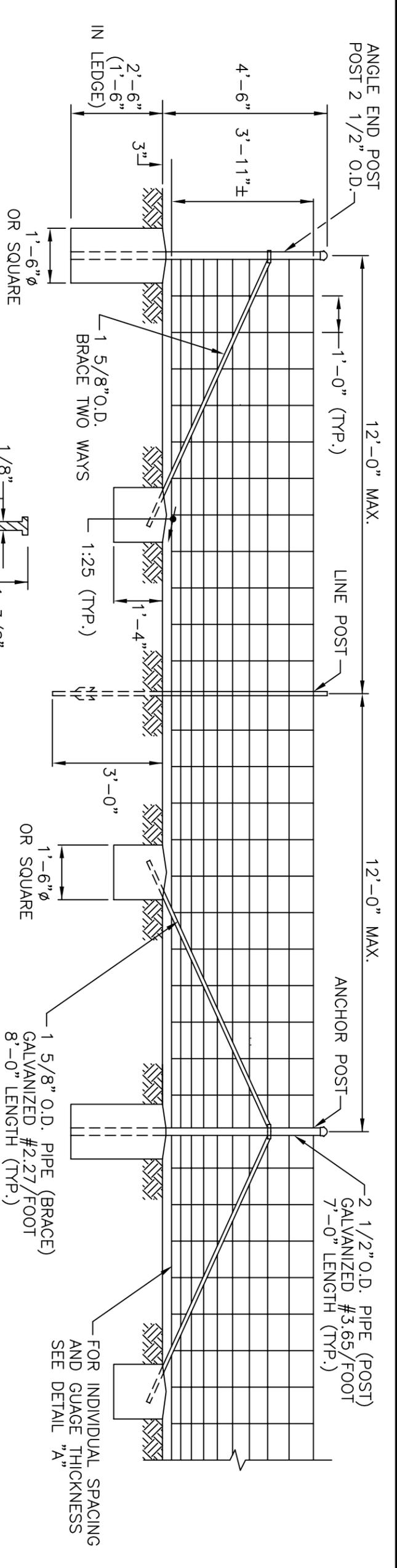
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*James H. Casaldi*  
CHIEF ENGINEER  
TRANSPORTATION

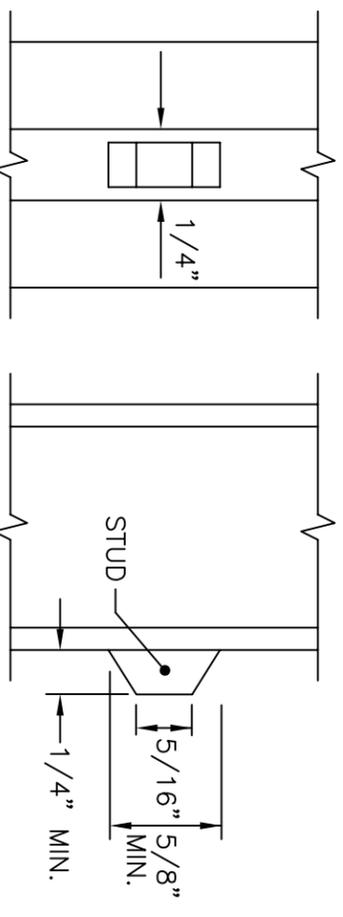
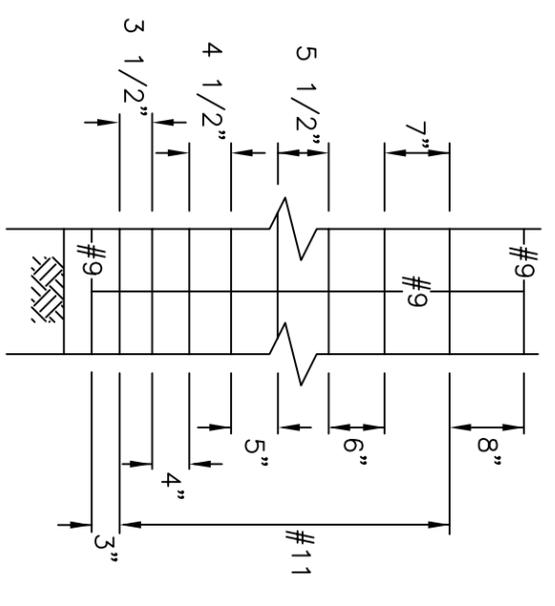
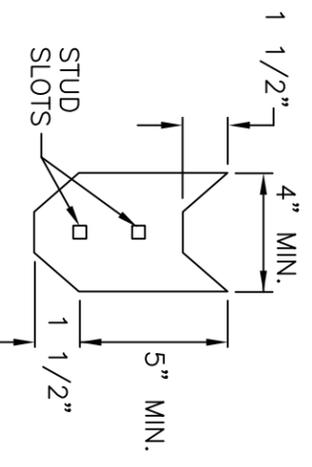
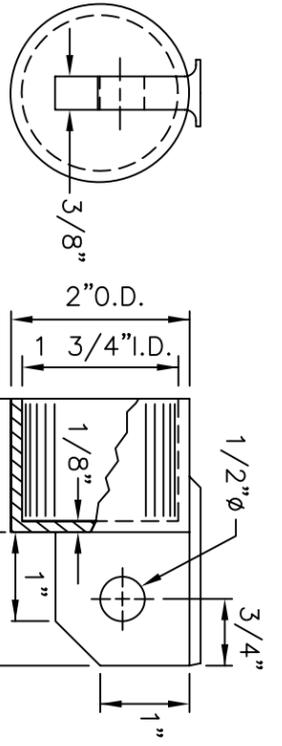
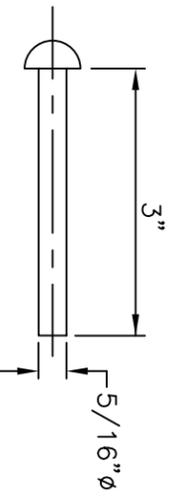
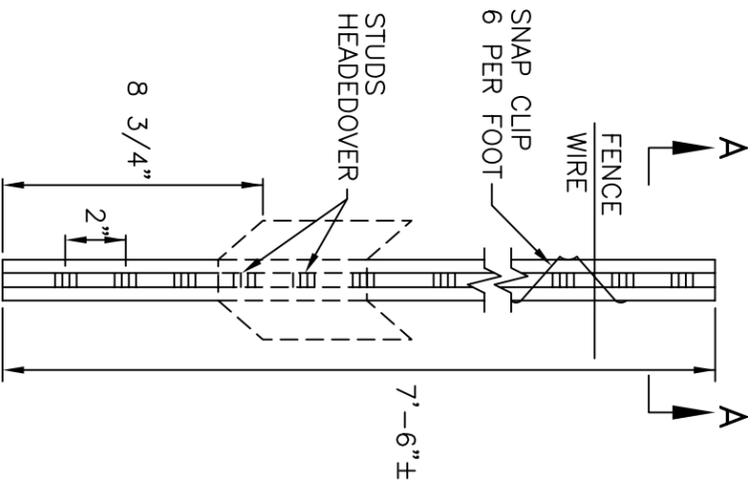
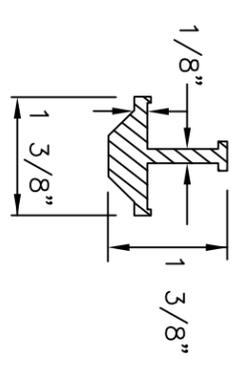
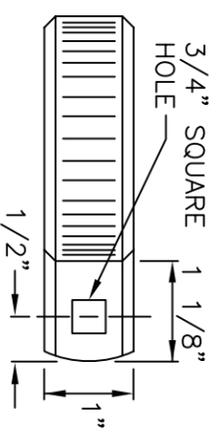
*Edmund J. Parker Jr.*  
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TRANSPORTATION

JUNE 15, 1998  
ISSUE DATE





CARRIAGE BOLT-NUT FOR ASSEMBLY  
5/16"-18 UNC-2A (1 1/4" LONG)



**STUDDED "T" LINE POST**

**ANCHOR PLATE**

**STUD DETAIL - LINE POST**

**NOTES:**

1. SHALL BE IN ACCORDANCE WITH SECTION 903 OF THE R.I. STANDARD SPECIFICATIONS.
2. CONNECT LINE BRACE AT ALL SAG - SUMMIT, IN LONG EVEN RUNS, BRACE EVERY 15 BAYS WITH NEAR BRACE POSTS 180'-0" C-C.
3. CAP TO BE SECURED TO PIPE POST WITH 5/16" PIN, PEENED TO HOLD, IN FIELD OR PREASSEMBLED.
4. THE BULB STUD TEE (1 3/8"x1 1/4"x1/8", 1.33 LB./FT.) IS AN ACCEPTABLE SUBSTITUTION.
5. ALL POSTS, FENCES, FIXTURES TO BE GALVANIZED. FIXTURES ARE AS SHOWN OR EQUIVALENT.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION  
WOVEN WIRE RIGHT-OF-WAY FENCE  
(STEEL POST)

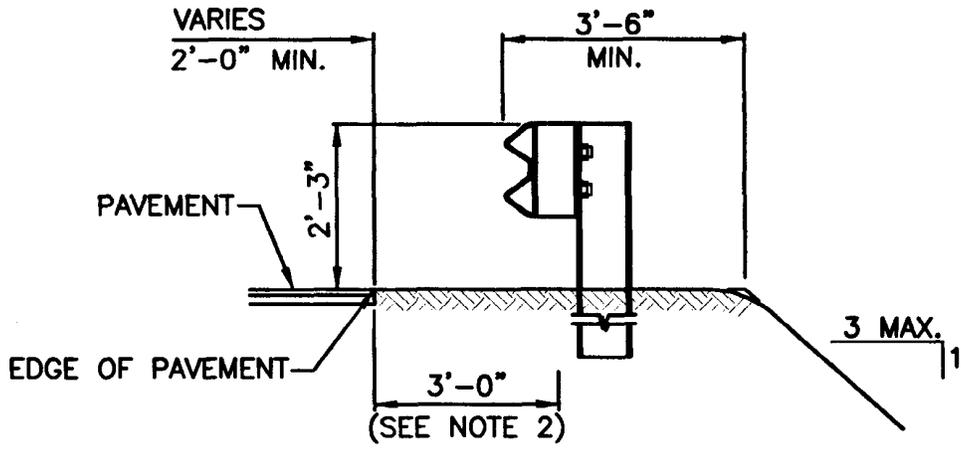
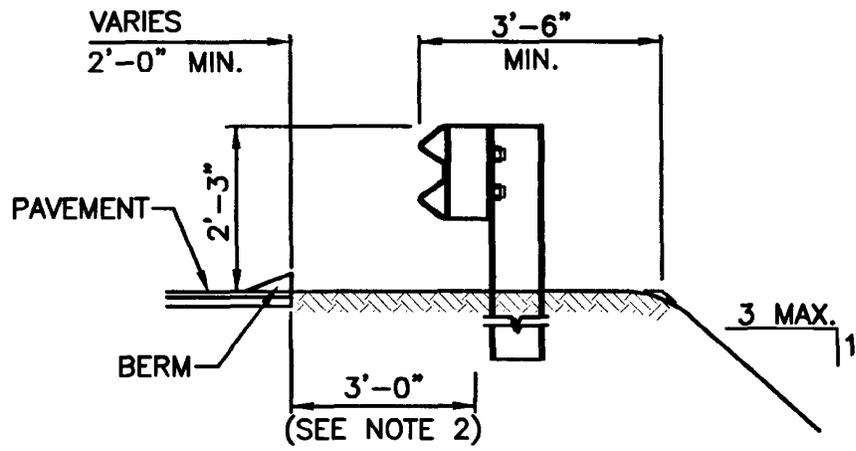
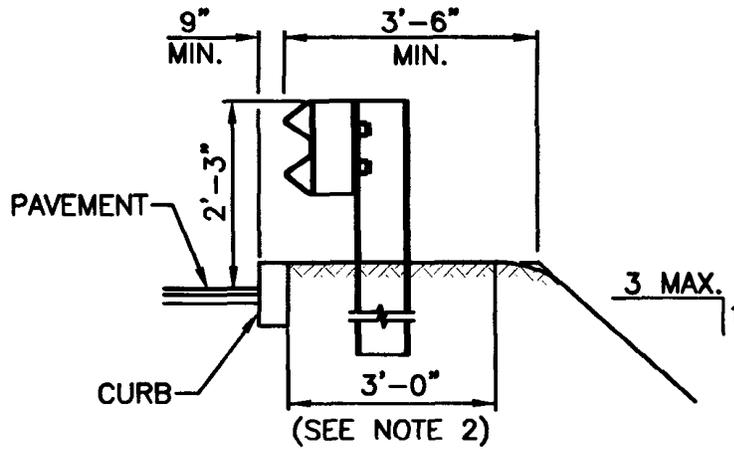
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*Jeanne A. Casabdi*  
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*Edmund Parker Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

JUNE 15, 1998  
ISSUE DATE

R.I.  
STANDARD  
31.3.0



**NOTES:**

1. SHALL BE IN ACCORDANCE WITH SECTION 901 OF THE R.I. STANDARD SPECIFICATIONS.
2. TREAT THIS AREA WITH HERBICIDE AFTER THE GUARD RAIL INSTALLATION AS REQUIRED.

**RHODE ISLAND DEPARTMENT OF TRANSPORTATION**

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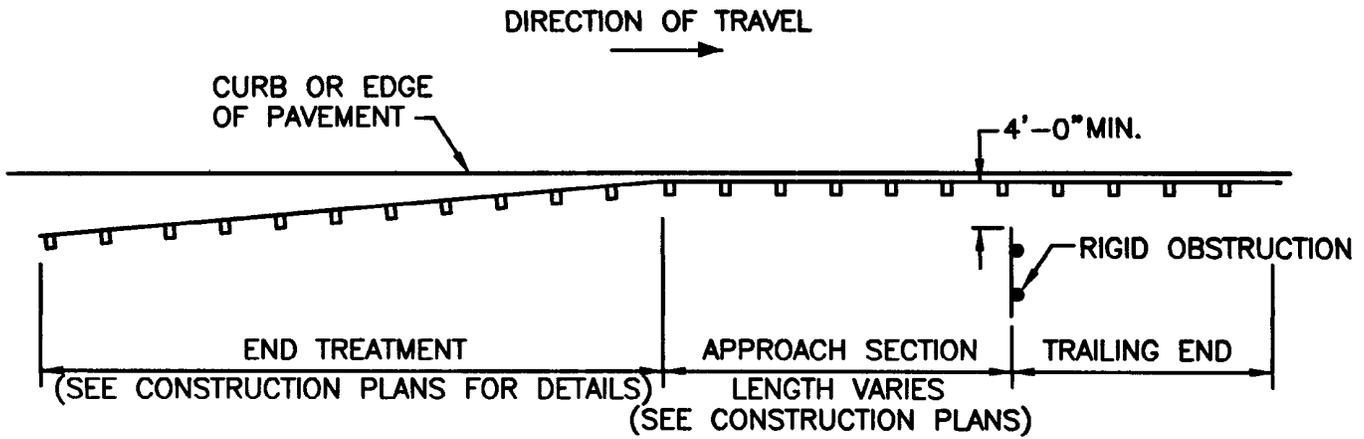
**TYPICAL GUARDRAIL INSTALLATION**

*James A. Casaldi*  
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 TRANSPORTATION

*Edmund J. Parker Jr.*  
 CHIEF DESIGN ENGINEER  
 TRANSPORTATION

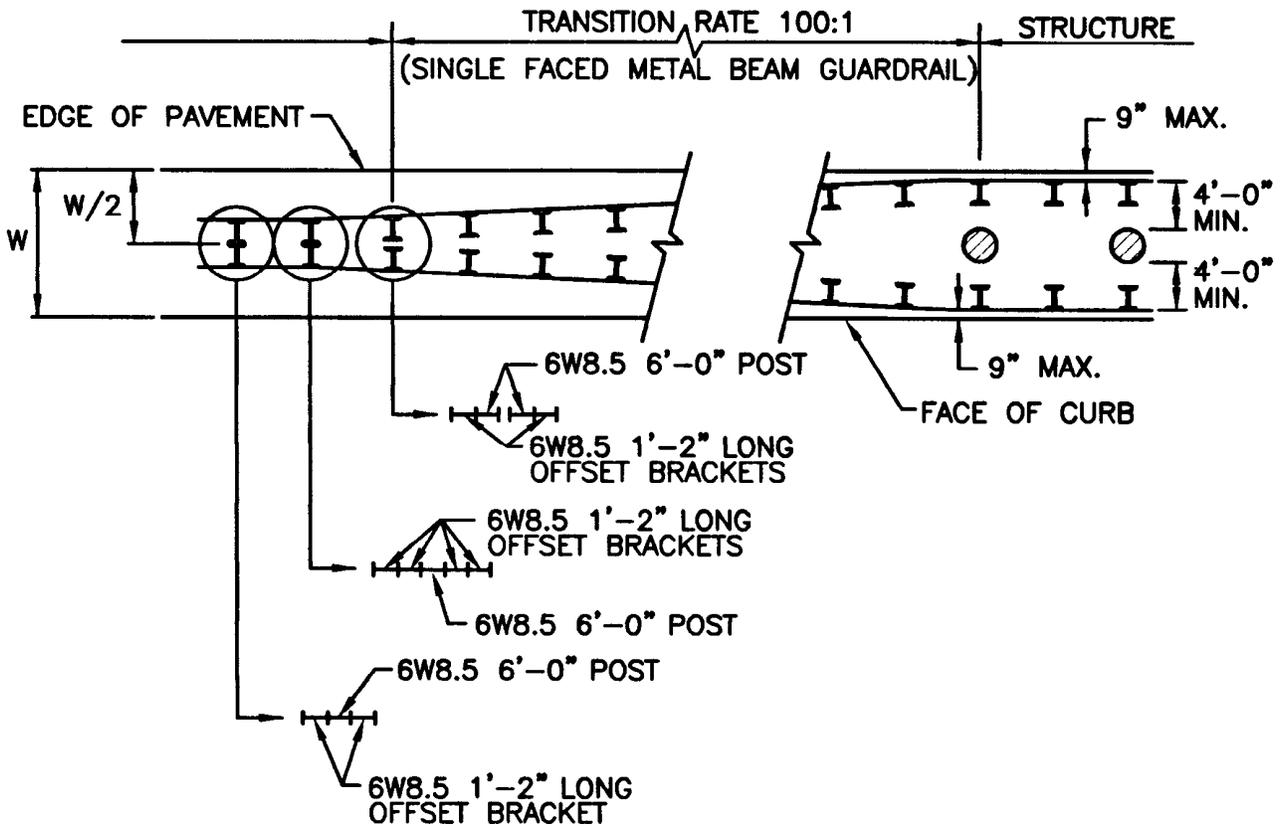
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NOTE: THIS DETAIL IS ONLY APPLICABLE IF OBSTRUCTION IS LESS THAN 30'-0" FROM THE EDGE OF THE TRAVEL LANE.

### DETAIL AT ROADSIDE OBSTRUCTION



### DETAIL AT PIERS

NOTE: SHALL BE IN ACCORDANCE WITH SECTION 901 OF THE R.I. STANDARD SPECIFICATIONS.

## RHODE ISLAND DEPARTMENT OF TRANSPORTATION

### TYPICAL GUARDRAIL INSTALLATION AT STRUCTURES

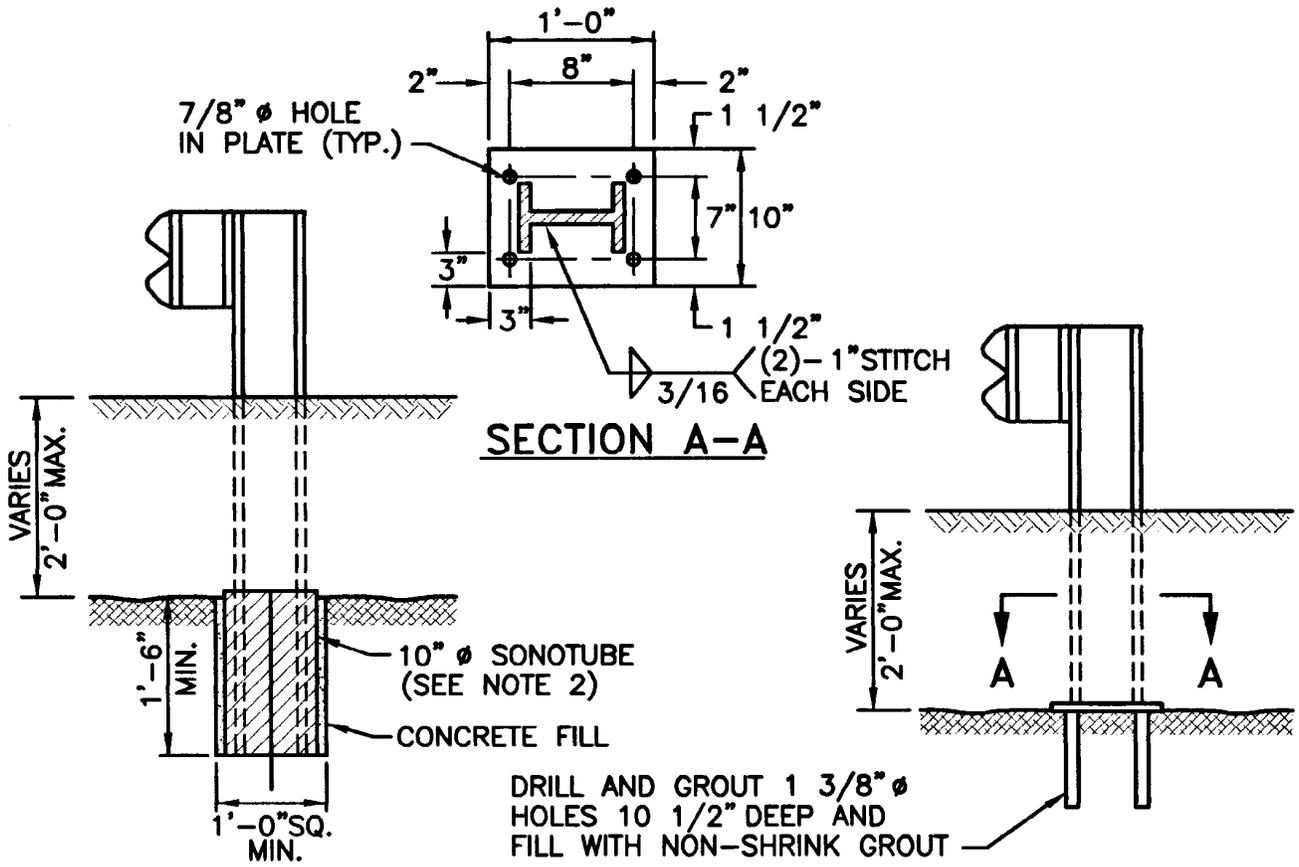
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*Jean A. Capaldi*  
CHIEF ENGINEER  
TRANSPORTATION

*Edmund Parker Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

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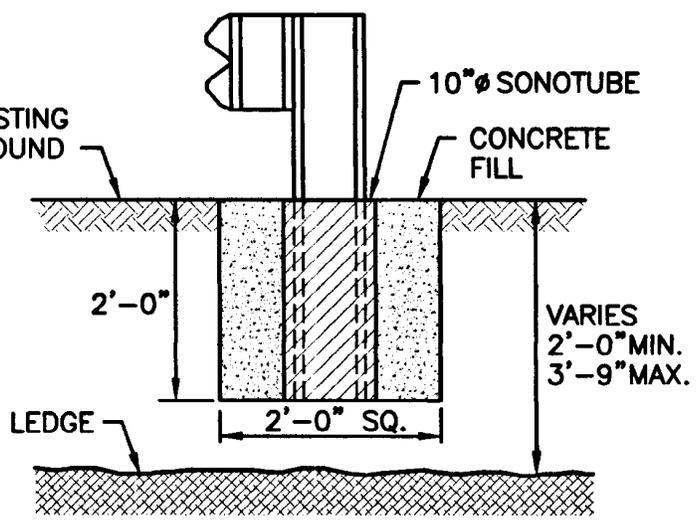
**SOFT TO MEDIUM LEDGE**

**HARD LEDGE**

**LEDGE 0'-0" TO 0'-2" BELOW GROUND**

**NOTES:**

1. SHALL BE IN ACCORDANCE WITH SECTION 901 OF THE R.I. STANDARD SPECIFICATIONS.
2. A 10"  $\phi$  DRILLED HOLE 1'-6" DEEP IS AN ACCEPTABLE SUBSTITUTE.
3. WET SAND FILL, HAND COMPACTED SHALL BE USED TO BACKFILL SONOTUBE AFTER INSERTING GUARDRAIL POST.



**LEDGE 2'-0" TO 3'-9" BELOW GROUND**

**RHODE ISLAND DEPARTMENT OF TRANSPORTATION**

**TYPICAL GUARDRAIL POST INSTALLATION IN LEDGE**

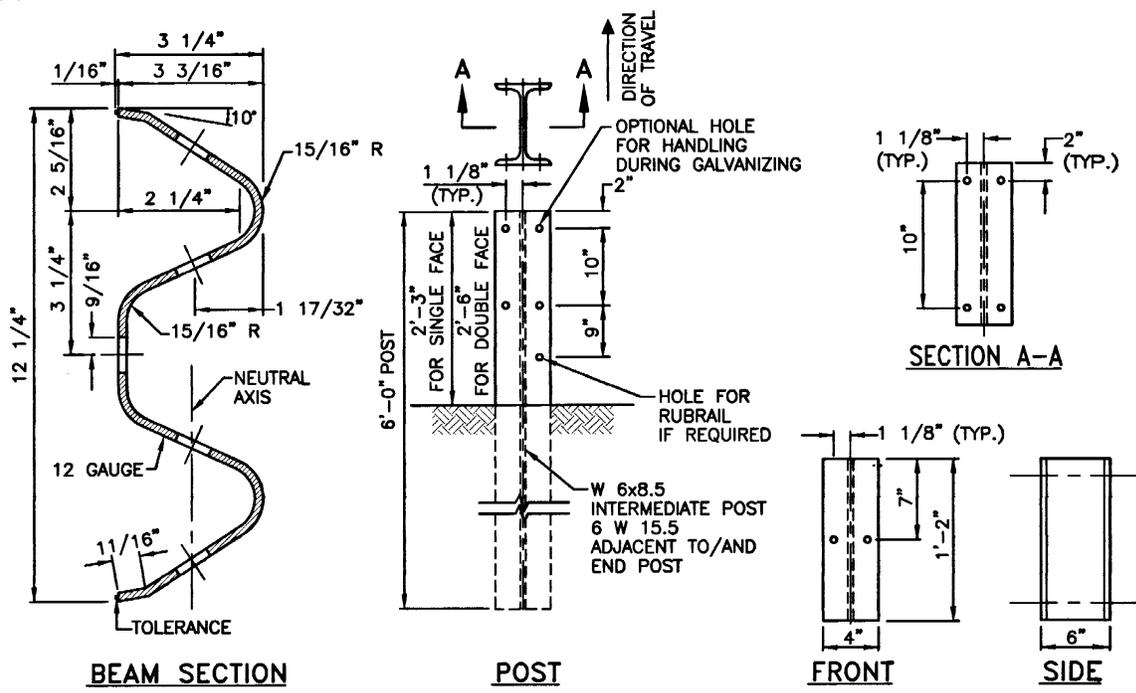
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*John A. Casabla*  
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 TRANSPORTATION

*Edmund J. Parker Jr.*  
 CHIEF DESIGN ENGINEER  
 TRANSPORTATION

JUNE 15, 1998  
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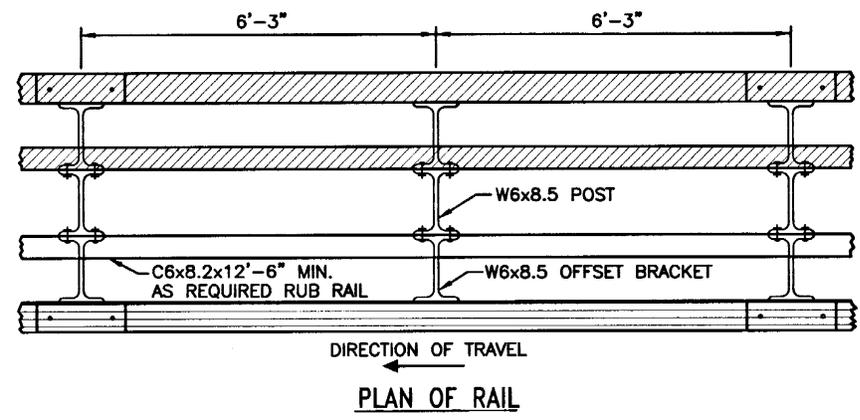


**BEAM SECTION**

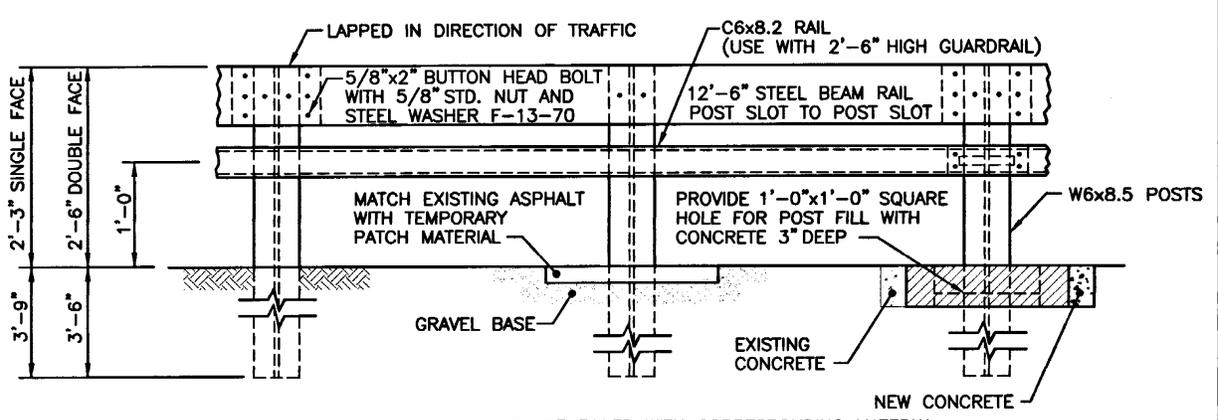
**POST**

**FRONT**

**SIDE**



**PLAN OF RAIL**



**ELEVATION OF RAIL**

- NOTES:**
1. SHALL BE IN ACCORDANCE WITH SECTION 901 OF THE R.I. STANDARD SPECIFICATIONS.
  1. POST AND OFFSET BRACKET TO BE FABRICATED FROM 6"x4" 8 1/2 LBS/FT. STEEL "H" SECTIONS.
  2. POST AND BRACKET BOLT HOLES TO BE OVAL UNLESS OTHERWISE SPECIFIED.
  4. ALL HOLES IN OFFSET BRACKETS SHALL BE 13/16".

NOTE: DEPRESSION TO BE FILLED WITH CORRESPONDING MATERIAL

**RHODE ISLAND DEPARTMENT OF TRANSPORTATION**

**STEEL BEAM GUARDRAIL**

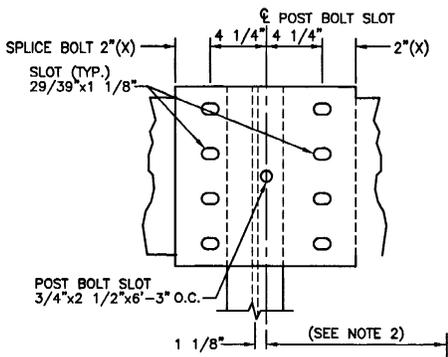
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*James A. Gault*  
 CHIEF ENGINEER  
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*Edward J. Parker Jr.*  
 CHIEF DESIGN ENGINEER  
 TRANSPORTATION

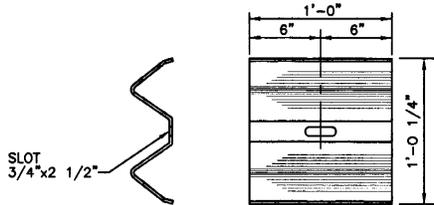
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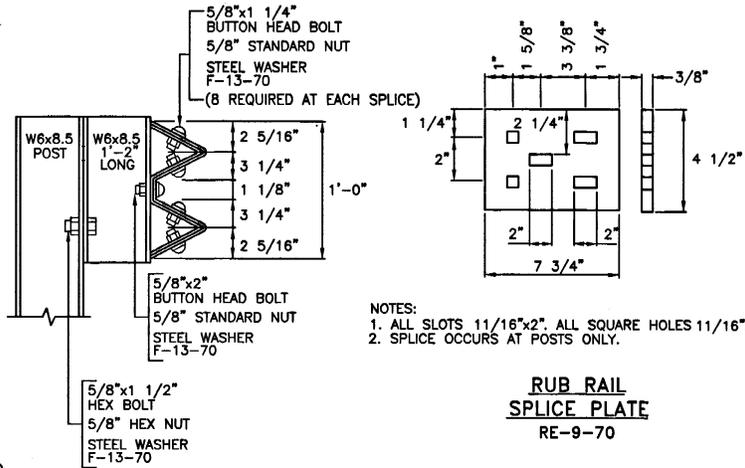


- NOTES:
- (X) TOLERANCE  $\begin{matrix} +1 \ 1/4" \\ -1 \ 1/4" \end{matrix}$
  - END POST BOLT SLOTS 12'-0" O.C.  
INTERMEDIATE POST SLOT 6'-3" O.C. (UNLESS OTHERWISE NOTED)

**SPlice DETAIL**



**BACK-UP PLATE**

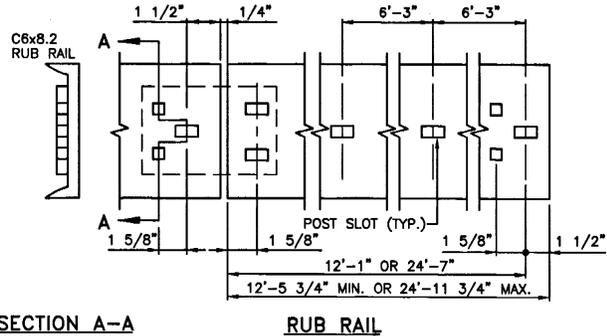


- NOTES:
- ALL SLOTS 11/16"x2". ALL SQUARE HOLES 11/16".
  - SPLICE OCCURS AT POSTS ONLY.

**RUB RAIL  
SPlice PLATE  
RE-9-70**

NOTE:  
SHALL BE IN ACCORDANCE WITH SECTION 901  
OF THE R.I. STANDARD SPECIFICATIONS.

**SECTION**



**SECTION A-A**

**RUB RAIL**

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

STEEL BEAM GUARDRAIL DETAILS

NO.	BY	DATE

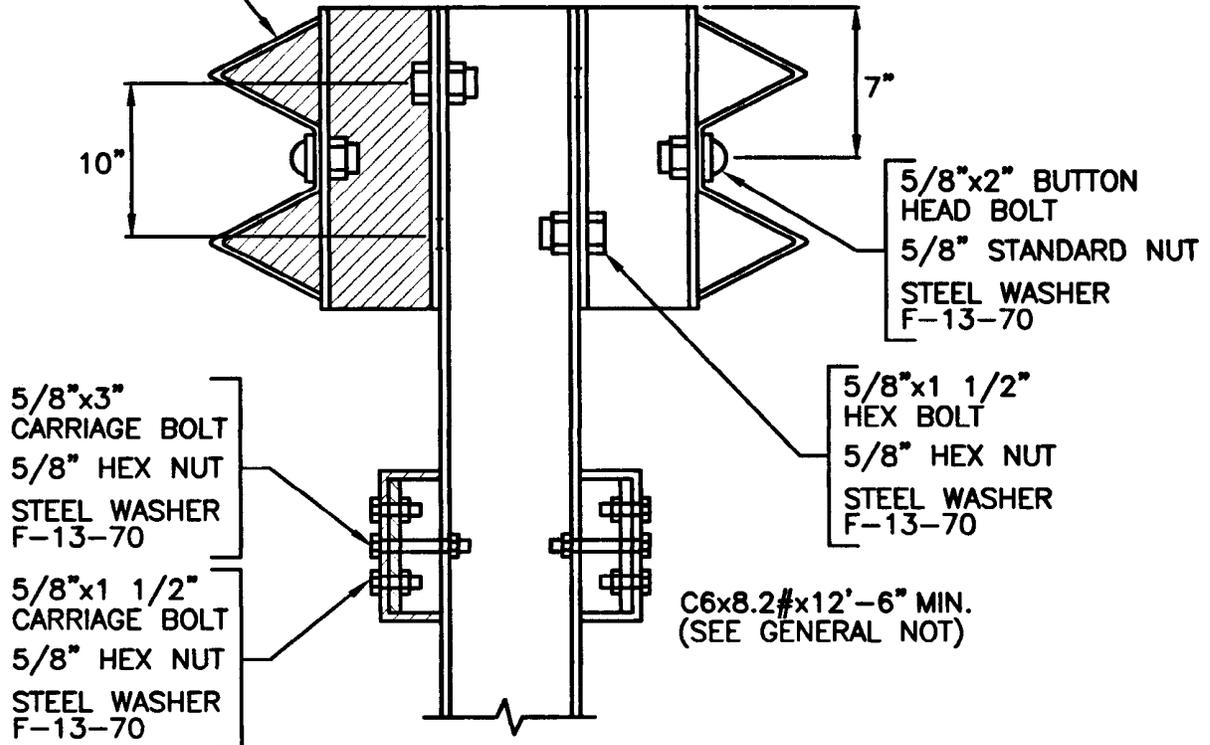
R.I. STANDARD  
34.2.1

JUNE 15, 1998  
ISSUE DATE

*Edward P. G...  
CHIEF DESIGN ENGINEER  
TRANSPORTATION*

*Edward P. G...  
CHIEF DESIGN ENGINEER  
TRANSPORTATION*

METAL BEAM RAIL



**NOTES:**

1. SHALL BE IN ACCORDANCE WITH SECTION 901 OF THE R.I. STANDARD SPECIFICATIONS.
2. ALL DIMENSIONS SUBJECT TO MANUFACTURING TOLERANCES.
3. AFTER GALVANIZING THE NUT SHALL BE FREE RUNNING ON THE BOLT.
4. THE RAIL ELEMENT SHALL BE SHOP CURVED WHEN THE PLACEMENT OF GUARDRAIL IS ON A CURVE HAVING A RADIUS OF 150'-0" OR LESS.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

STEEL BEAM GUARDRAIL  
DOUBLE FACED ASSEMBLY

REVISIONS		
NO.	BY	DATE

*James H. Gualdi*  
CHIEF ENGINEER  
TRANSPORTATION

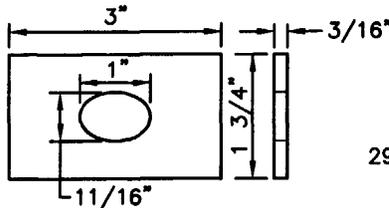
*Edmund J. Parker Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

JUNE 15, 1998  
ISSUE DATE

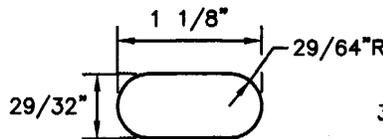


NOTE: SHALL BE IN ACCORDANCE WITH SECTION 901 OF THE R.I. STANDARD SPECIFICATIONS.

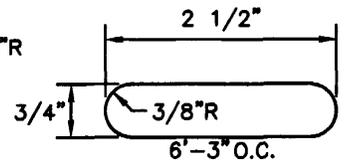
BOLT SELECTION TABLE				
INTENDED USE	BOLT TYPE	L	THREAD LENGTH	NUT TYPE
AS SPLICE ON "W" BEAM GUARD RAIL	5/8" Ø BUTTON HEAD	1 1/4"	FULL	5/8" Ø STANDARD
FOR FASTENING "W" BEAM RAIL TO STEEL POSTS OR BRACKET	5/8" Ø BUTTON HEAD	2"	1 1/2" MIN.	5/8" Ø STANDARD
AS SPLICE BOLT FOR CHANNEL RUB RAIL ELEMENTS USED IN "W" BEAM GUARD RAIL	5/8" Ø CARRIAGE HEAD	1 1/4"	FULL	5/8" Ø HEX
FOR FASTENING CHANNEL RUB RAIL ELEMENTS TO STEEL POSTS IN "W" BEAM GUARD RAIL	5/8" Ø CARRIAGE HEAD	3"	1 1/2" MIN.	5/8" Ø HEX
FOR FASTENING STEEL BLOCK TO STEEL POSTS	5/8" Ø HEX	1 1/2"	FULL	5/8" Ø HEX



RECTANGULAR  
PLATE WASHER F-12-70



SPLICE BOLT  
SLOT



POST BOLT SLOT

NOTE: USE ONLY AT 8th POST ON STD. 34.3.1

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

STEEL BEAM GUARDRAIL FIXTURES

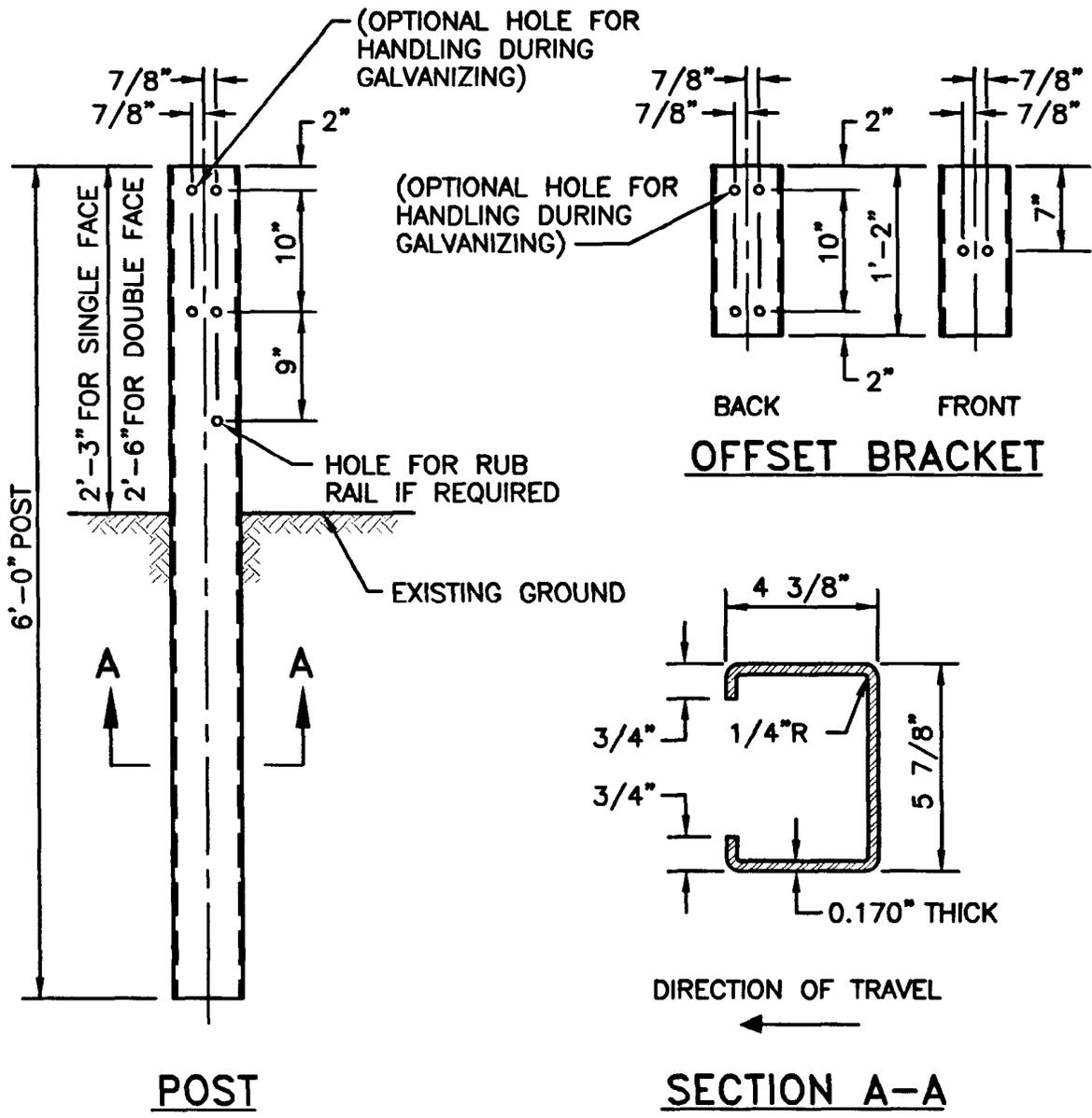
REVISIONS		
NO.	BY	DATE

CHIEF ENGINEER  
TRANSPORTATION  
*James R. Gault*

CHIEF DESIGN ENGINEER  
TRANSPORTATION  
*Sharon M. Boyle*

ISSUE DATE  
JUNE 15, 1998





**NOTES:**

1. SHALL BE IN ACCORDANCE WITH SECTION 901 OF THE R.I. STANDARD SPECIFICATIONS.
2. ALL HOLES TO BE 13/16" Ø.
3. ONLY ONE TYPE OF POST SHALL BE USED IN A SINGLE RUN. OPEN SIDE SHALL FACE AWAY FROM DIRECTION OF ONCOMING TRAFFIC.

**RHODE ISLAND DEPARTMENT OF TRANSPORTATION**

**STEEL BEAM GUARDRAIL POST AND OFFSET BRACKET "C" SECTION**

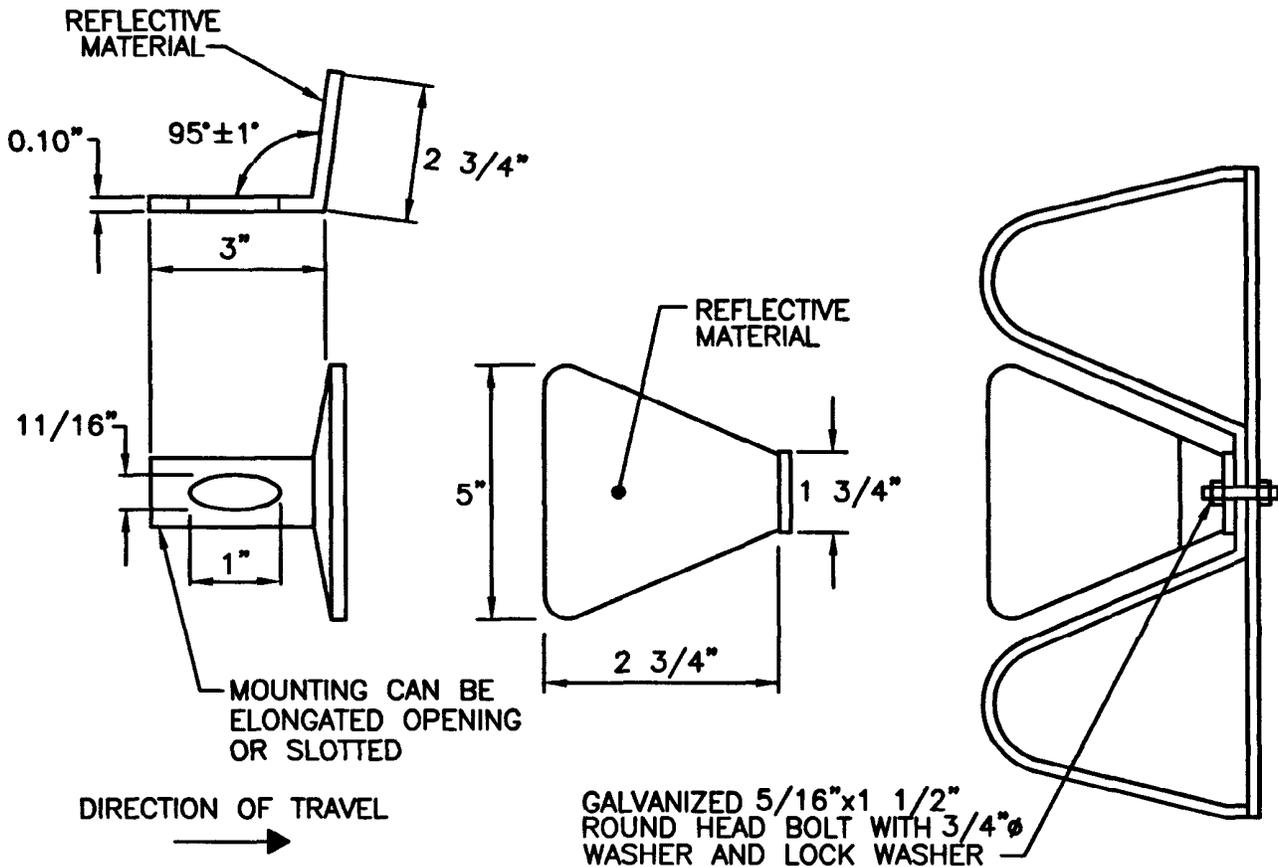
REVISIONS		
NO.	BY	DATE

*James A. Casaldi*  
 CHIEF ENGINEER  
 TRANSPORTATION

*Edmund J. Parker*  
 CHIEF DESIGN ENGINEER  
 TRANSPORTATION

JUNE 15, 1998  
 ISSUE DATE





**NOTES:**

1. SHALL BE IN ACCORDANCE WITH SECTION 901 OF THE R.I. STANDARD SPECIFICATIONS.
2. REFLECTIVE MATERIAL SHALL BE OF ENCAPSULATED LENS SILVER OR AMBER.
3. SILVER REFLECTORS SHALL BE INSTALLED ON THE RIGHT SIDE OF THE ROAD AND AMBER ON THE LEFT, IN ACCORDANCE WITH MUTCD GUIDELINES FOR PAVEMENT EDGELINE MARKINGS.
4. THE REFLECTORIZED ALUMINUM WASHER IS TO BE PLACED IN VALLEY OF BEAM WHEN MOUNTING BEAM ONTO EACH SIXTH POST.
5. REFLECTORIZED GALVANIZED WASHERS MAY BE USED AS AN OPTION.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

STEEL BEAM GUARDRAIL  
REFLECTORIZED TRIANGULAR DELINEATOR

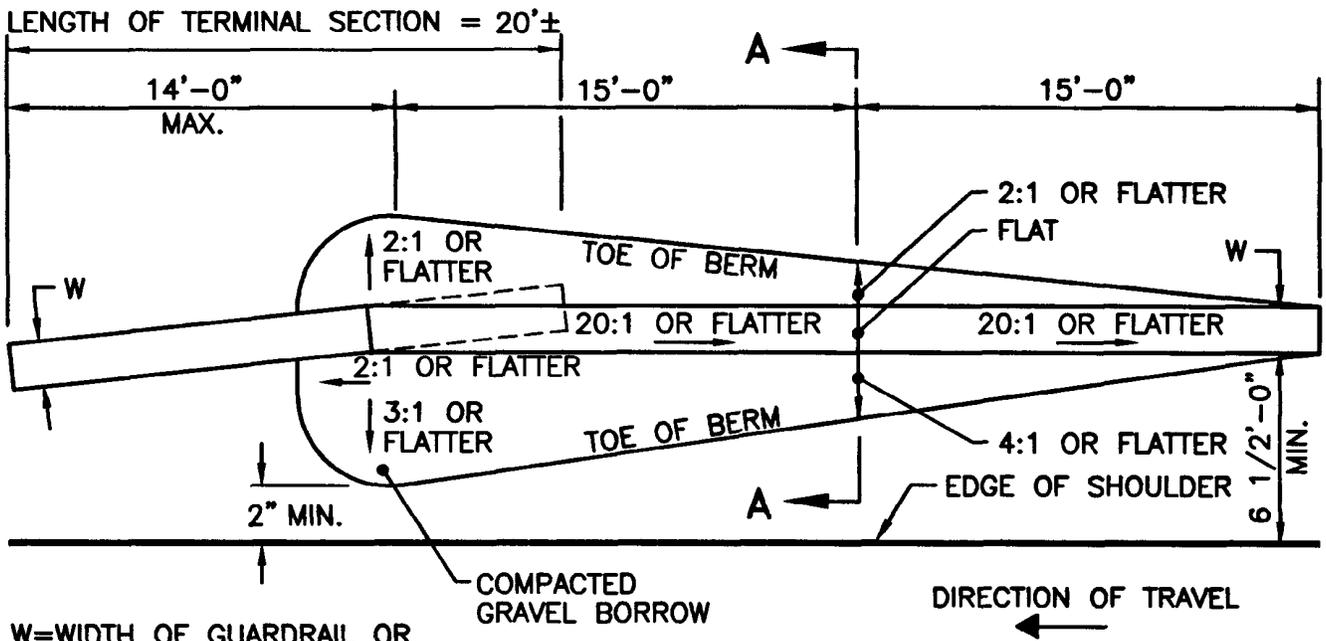
REVISIONS		
NO.	BY	DATE

*James A. Cypriani*  
CHIEF ENGINEER  
TRANSPORTATION

*Edmund J. Parker Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

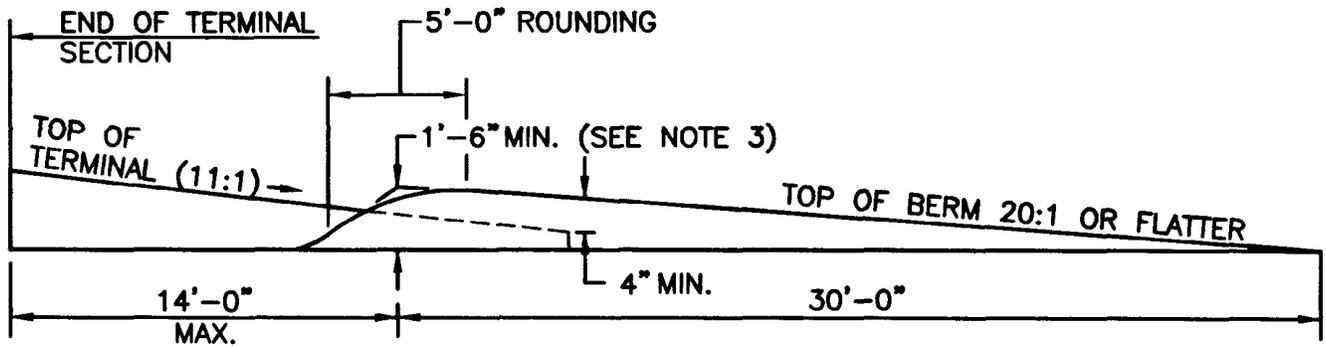
JUNE 15, 1998  
ISSUE DATE



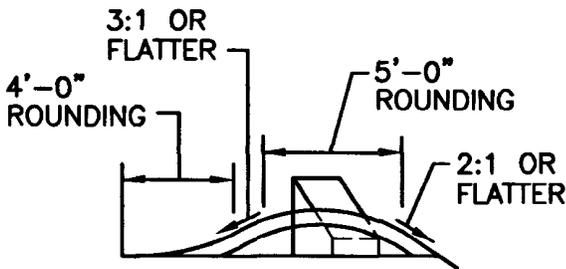


W=WIDTH OF GUARDRAIL OR  
WIDTH OF GUARDRAIL AND POST

PLAN



ELEVATION



SECTION A-A

NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION 901 OF THE R.I. STANDARD SPECIFICATIONS.
2. THE ACTUAL DIMENSIONS OF THE BERM SHALL VARY IN ACCORDANCE WITH THE VARIABLE DIMENSIONS SHOWN AND AS DIRECTED BY THE ENGINEER.
3. SEE PLANS FOR DETAILS OF SPECIFIED ROADSIDE BARRIER AND TERMINAL SECTIONS.
4. IF THE TAPER ON THE TOP OF THE TERMINAL SECTION IS STEEPER THAN 11:1, THE MINIMUM HEIGHT OF THE BERM SHALL BE 2'-0".

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE

EARTH BERM FOR ROADSIDE  
BARRIER TERMINAL SECTIONS

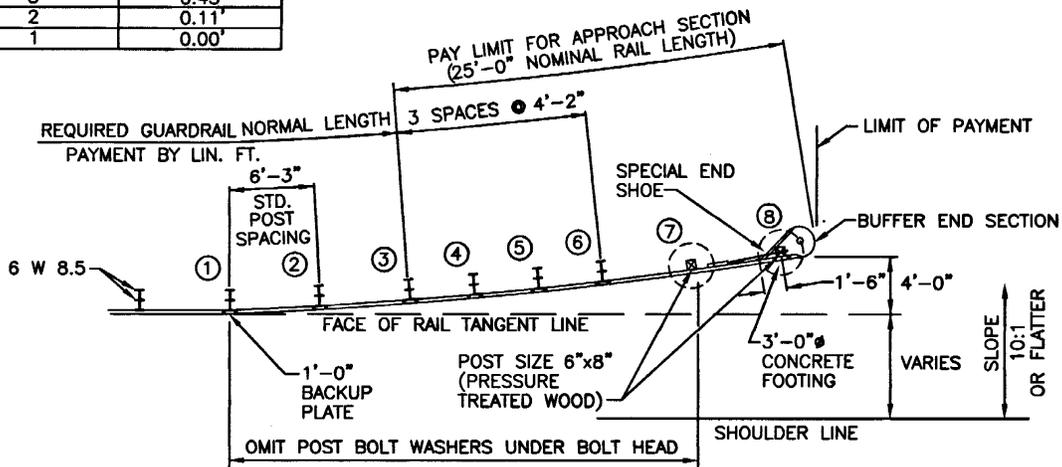
*James H. Casabelli*  
CHIEF ENGINEER  
TRANSPORTATION

*Edmund J. Parker Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

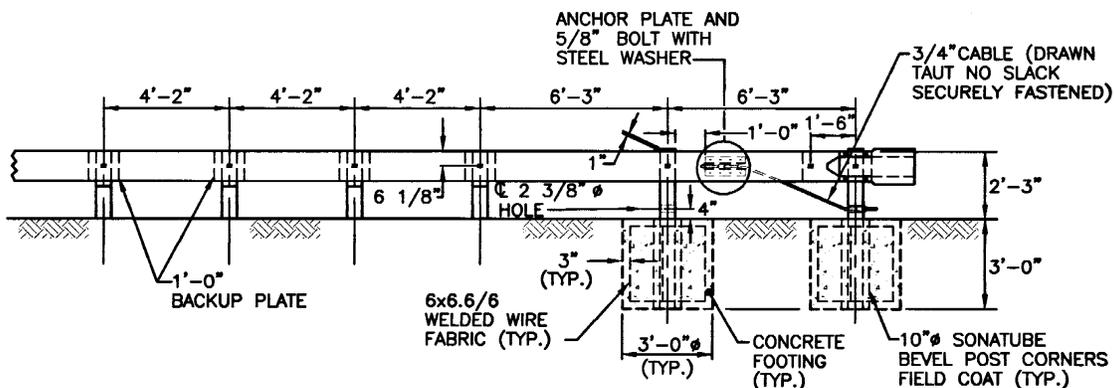
JUNE 15, 1998  
ISSUE DATE



OFFSET TO FACE OF POST FROM BACK OF RAIL ALIGNMENT	
POST NO.	OFFSET
8	4.00'
7	2.79'
6	1.79'
5	1.25'
4	0.80'
3	0.45'
2	0.11'
1	0.00'



**PLAN**



**ANCHORAGE DETAIL**

**NOTES:**

1. SHALL BE IN ACCORDANCE WITH SECTION 901 OF THE R.I. STANDARD SPECIFICATIONS.
2. THIS STANDARD IS NOT TO BE USED WHEN THE DESIGN SPEED IS EXCEEDS 45 MPH.
3. ALL METAL BEAM RAIL, POST, OFFSET BRACKETS, NUTS, BOLTS, WASHERS, AND ALL OTHER ACCESSORIES SHALL BE HOT DIPPED GALVANIZED.
4. ALL DIMENSIONS SUBJECT TO MANUFACTURERS' TOLERANCES.
5. AFTER GALVANIZING, THE NUT SHALL BE FREE RUNNING ON THE BOLT.
6. THE RAIL ELEMENT SHALL BE SHOP CURVED WHEN THE PLACEMENT OF GUARDRAIL IS ON A CURVE HAVING A RADIUS OF 150'-0" OR LESS. NO ADDITIONAL PAYMENT SHALL BE ALLOWED FOR THIS WORK.
7. POST AND OFFSET BRACKET TO BE FABRICATED FROM 6"x4" 8 1/2 LBS. STEEL "H" SECTIONS.
8. POST AND BRACKET BOLT HOLES TO BE OVAL UNLESS OTHERWISE SPECIFIED.
9. ALL HOLES SHALL BE 13/16".
10. FOR DETAILS ON CABLE, ANCHOR PLATE, END POST, BUFFER END SECTION, AND BACKUP PLATE SEE STD. 34.3.3.
11. TO FACILITATE REMOVAL OF BROKEN WOOD POST, 10" Ø (ONLY) PERMANENT CARDBOARD SONATUBES OR METAL SLEEVES ARE TO BE INSTALLED AROUND THE POST PRIOR TO CASTING THE FOOTINGS. (SLEEVE TO BE FILLED WITH CONCRETE SAND.) CORNERS OF POST TO BE BEVELED TO FIT 10" SONATUBE. FIELD TREAT THE BEVELS WITH CHROMATED COPPER.
12. FOR TRAILING END OF GUARDRAIL ADJACENT TO ONE-WAY ROADWAY OMIT TERMINAL SECTION. NEXT TO LAST POST TO BE A LINE POST.
13. USE NO WASHERS UNDER POST BOLT HEADS FROM FIRST THRU SEVENTH POSTS.

**RHODE ISLAND DEPARTMENT OF TRANSPORTATION**

**GUARDRAIL END SECTION**

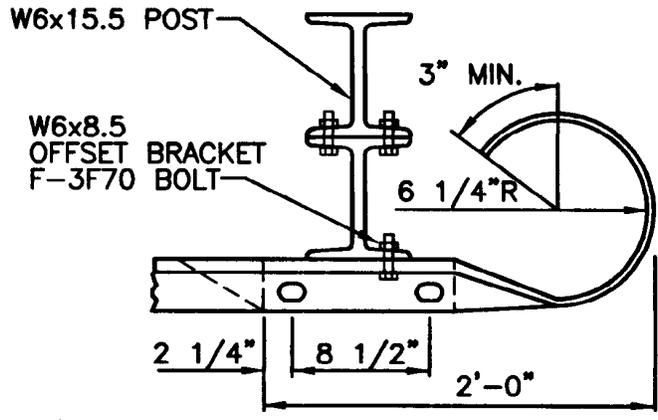
REVISIONS		
NO.	BY	DATE

*James K. Conelli*  
 CHIEF ENGINEER  
 TRANSPORTATION

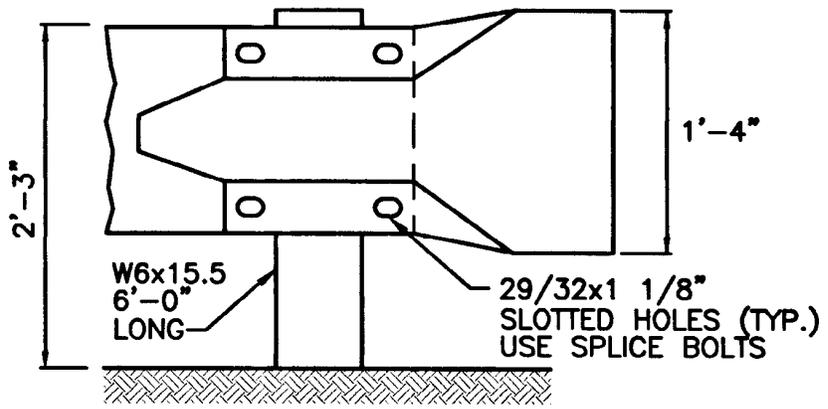
*Edmund Parker Jr.*  
 CHIEF DESIGN ENGINEER  
 TRANSPORTATION

JUNE 15, 1998  
 ISSUE DATE





PLAN



ELEVATION

**NOTE:**  
SHALL BE IN ACCORDANCE WITH SECTION 901 OF THE R.I. STANDARD SPECIFICATIONS.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

TERMINAL END SECTION  
(SINGLE FACE)

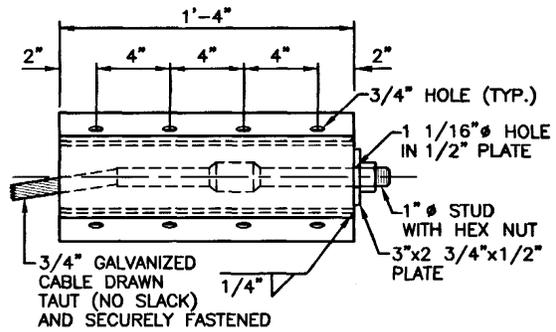
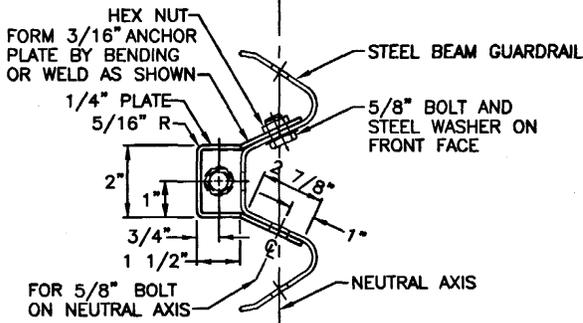
REVISIONS		
NO.	BY	DATE

*Jeanne A. Capaldi*  
CHIEF ENGINEER  
TRANSPORTATION

*Edmund J. Parker Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

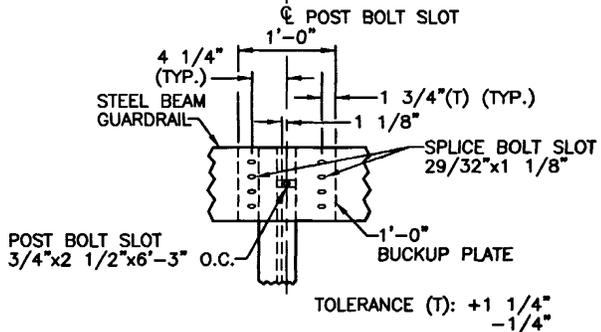
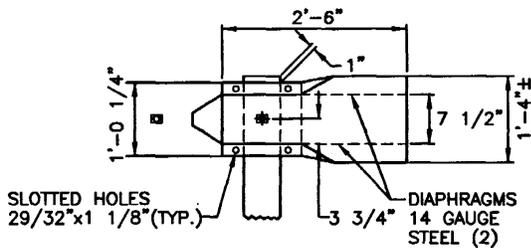
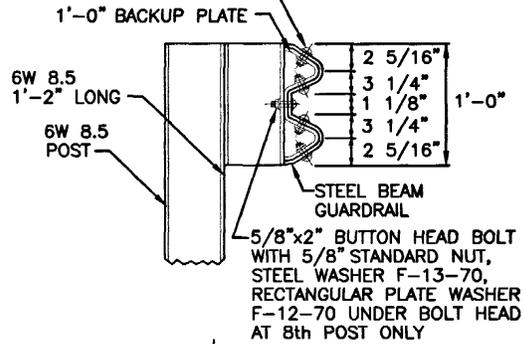
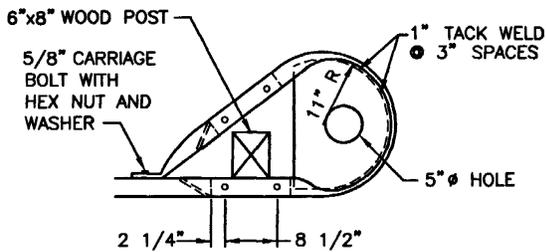
JUNE 15, 1998  
ISSUE DATE





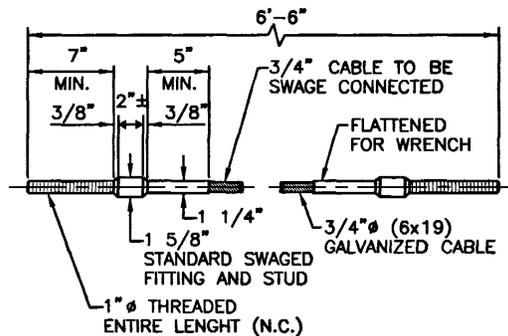
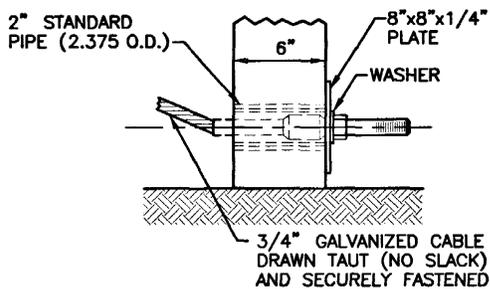
**ANCHOR PLATE DETAILS**

5/8"x1 1/4" BUTTON HEAD BOLT WITH 5/8" STANDARD NUT AND STEEL WASHER F-13-70 (8 REQUIRED AT EACH SPLICE)



**BUFFER END DETAILS**

**BACKUP PLATE DETAILS**



**ANCHORAGE DETAIL AT POST**

**CABLE ASSEMBLY**

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE

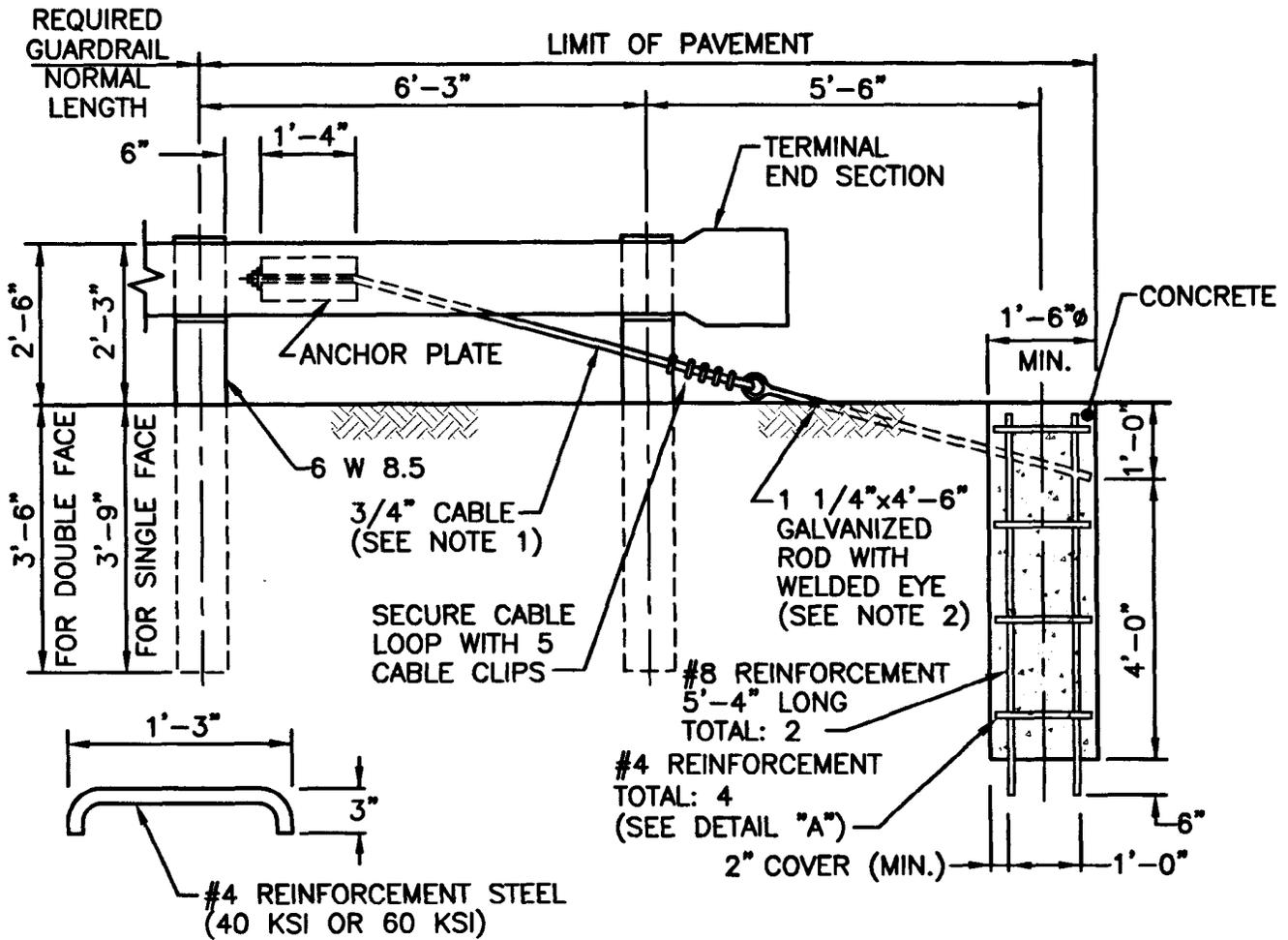
**ANCHORAGE DETAILS  
APPROACH END SECTION**

*John A. Capelli*  
CHIEF ENGINEER  
TRANSPORTATION

*Edward J. Parker*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

JUNE 15, 1998  
ISSUE DATE

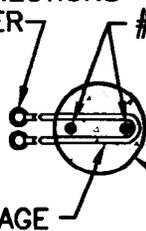




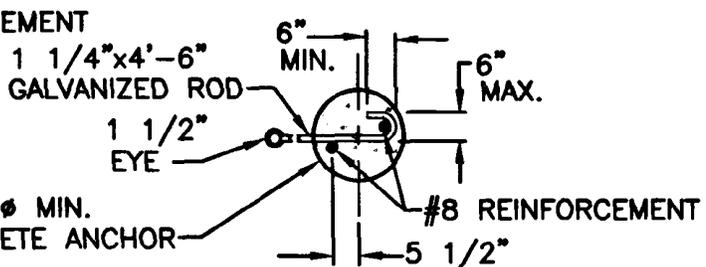
**DETAIL "A"**

1 1/2" EYES  
ORIENT TO ACCOMMODATE  
TURNBUCKLE CONNECTIONS  
FOR CABLE BARRIER

1 1/4"x4'-6"  
GALVANIZED RODS  
PARALLEL TO AXIS  
OF GUARDRAIL AT  
POINT OF ANCHORAGE



**DOUBLE GUARDRAIL  
ANCHOR**



**SINGLE GUARDRAIL  
ANCHOR**

**NOTES:**

1. SHALL BE IN ACCORDANCE WITH SECTION 901 OF THE R.I. STANDARD SPECIFICATIONS.
2. CABLE TO BE PARALLEL TO GUARDRAIL FOR STRAIGHT RUNS OF RAIL. CABLE MAY HAVE ANGLE POINT AT ANCHOR PLATE IF GUARDRAIL IS CURVED.

**RHODE ISLAND DEPARTMENT OF TRANSPORTATION**

**ANCHORAGE DETAILS  
TRAILING END SECTION**

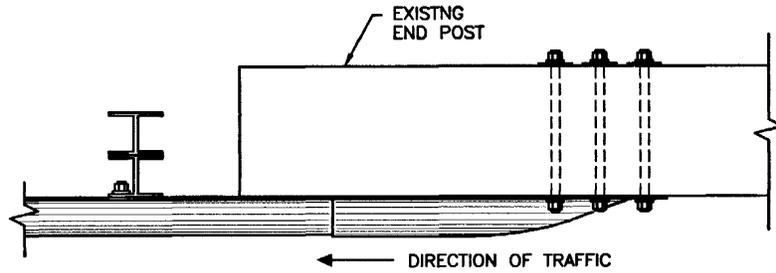
REVISIONS		
NO.	BY	DATE

*James A. Capaldi*  
CHIEF ENGINEER  
TRANSPORTATION

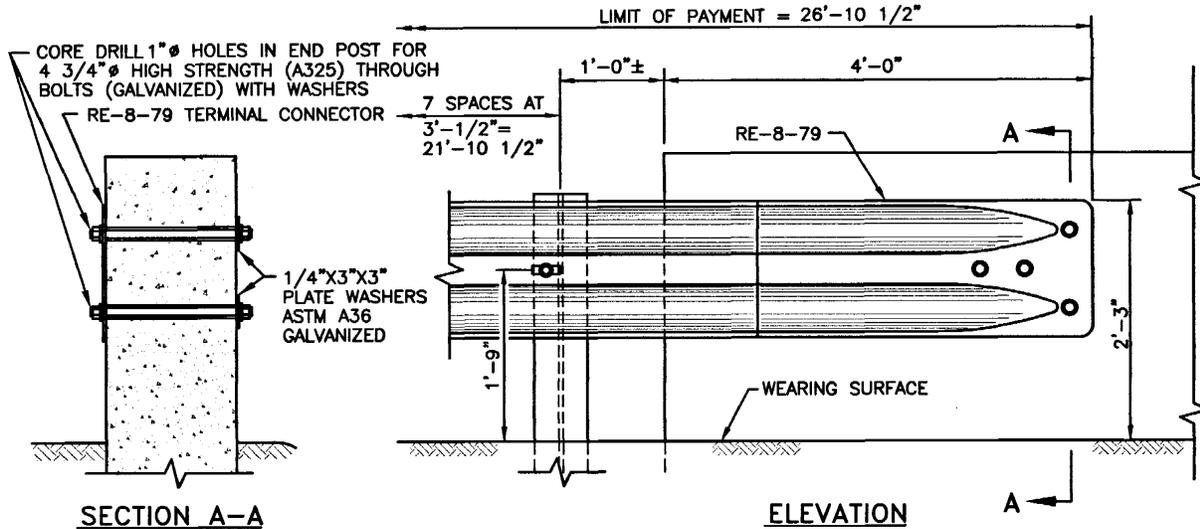
*Edmund J. Parker Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

JUNE 15, 1998  
ISSUE DATE

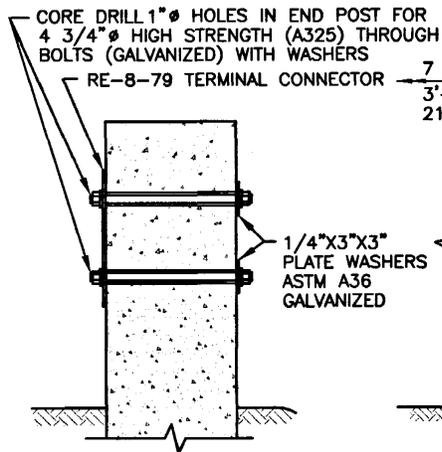




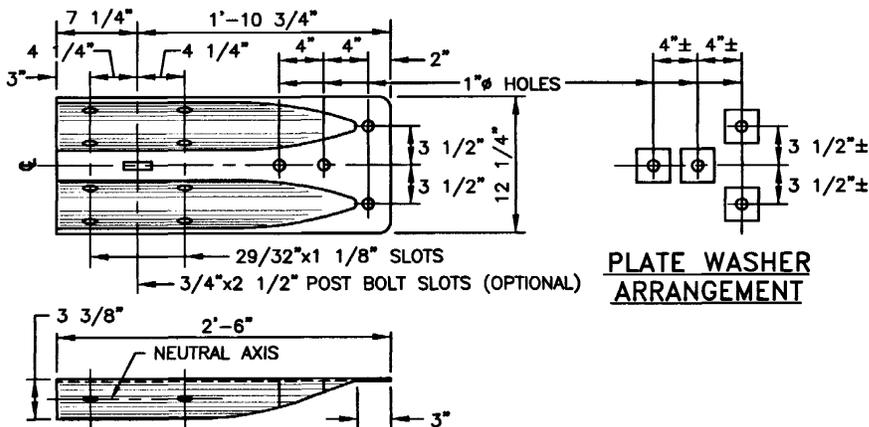
**PLAN**



**ELEVATION**



**SECTION A-A**



**TERMINAL CONNECTOR  
(RE-8-79)**

**PLATE WASHER  
ARRANGEMENT**

**NOTES:**

1. SHALL BE IN ACCORDANCE WITH SECTION 901 OF THE R.I. STANDARD SPECIFICATIONS.
2. TERMINAL CONNECTOR, GUARDRAIL, POSTS, BRACKETS, ALL HARDWARE, NUTS, BOLTS WASHERS, DRILLING AND ALL OTHER INCIDENTALS NECESSARY TO COMPLETE THE INSTALLATION ARE INCLUDED AS PART OF THIS STANDARD.
3. DIMENSIONAL TOLERANCES NOT SHOWN OR IMPLIED ARE INTENDED TO BE THOSE CONSISTENT WITH THE PROPER FUNCTIONING OF THE PART, INCLUDING ITS APPEARANCE, AND ACCEPTED MANUFACTURING PRACTICES.

**RHODE ISLAND DEPARTMENT OF TRANSPORTATION**

**GUARDRAIL CONNECTION TO EXISTING END POST  
APPROACH END SECTION**

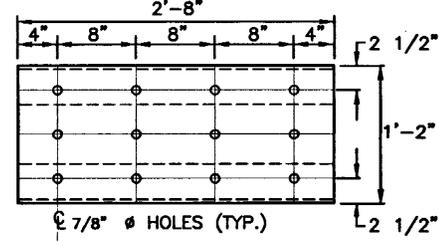
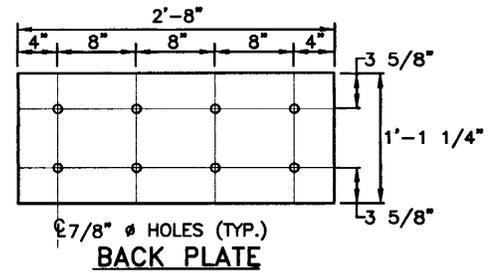
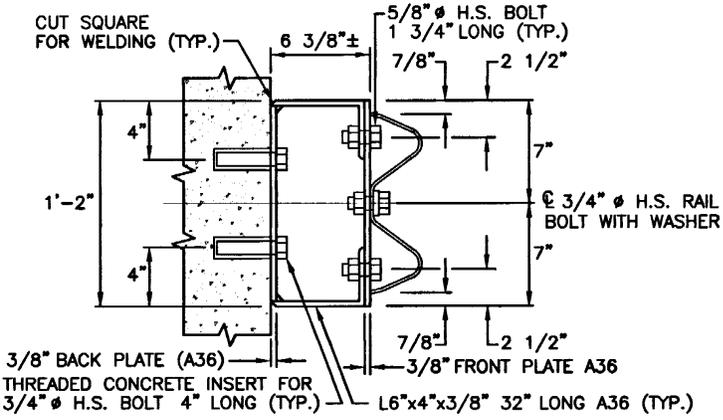
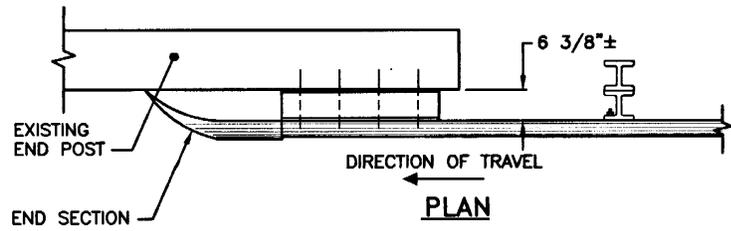
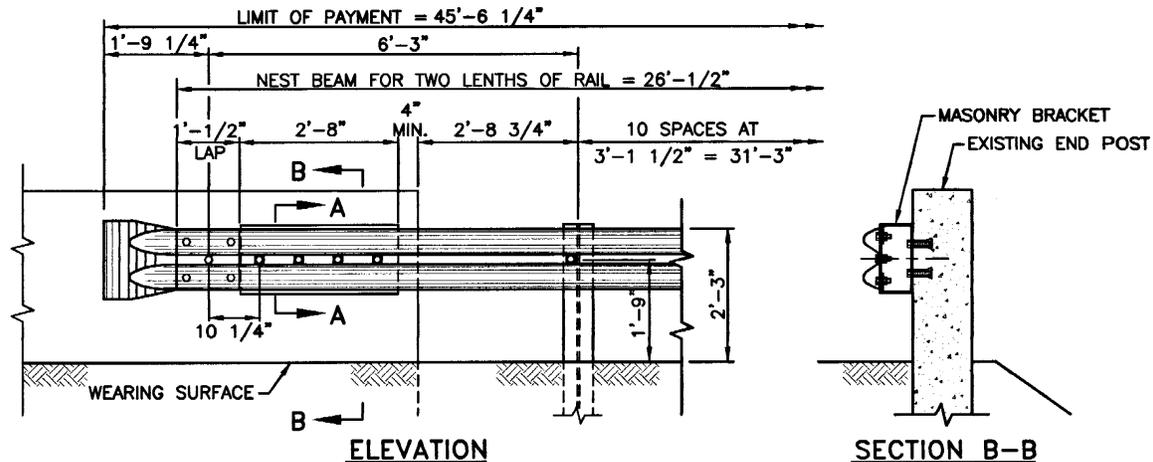
REVISIONS		
NO.	BY	DATE

*John K. Capelli*  
CHIEF ENGINEER  
TRANSPORTATION

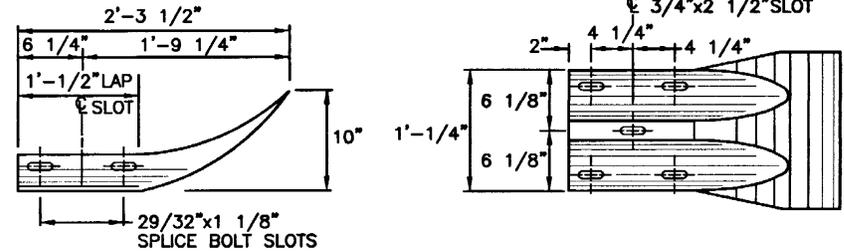
*Edward P. Parker, Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

JUNE 15, 1998  
ISSUE DATE





**SECTION A-A** **FRONT PLATE AND ANGLES**  
**MASONRY BRACKET**



**FLARED END SECTION SECTION (RE-5-76)**

- NOTES:**
1. SHALL BE IN ACCORDANCE WITH SECTION 901 OF THE R.I. STANDARD SPECIFICATIONS.
  2. MASONRY BRACKET, END SECTION, GUARDRAIL, POSTS ALL HARDWARE, NUTS, BOLTS, WASHERS, DRILLING AND ALL OTHER INCIDENTALS NECESSARY TO COMPLETE THE INSTALLATION ARE INCLUDED AS PART OF THIS STANDARD.
  3. ALL STRUCTURAL SHAPES WHICH MAKE UP THE MASONRY BRACKET SHALL BE GALVANIZED.
  4. FOR HIGH SPEED, UPGRADE TO THIER BEAM ESPECIALLY AT FIXED OBJECT LOCATIONS.
  5. DIMENSIONAL TOLERANCES NOT SHOWN OR IMPLIED ARE INTENDED TO BE THOSE CONSISTENT WITH THE PROPER FUNCTIONING OF THE PART, INCLUDING ITS APPEARANCE, AND ACCEPTED MANUFACTURING PRACTICES.

**RHODE ISLAND DEPARTMENT OF TRANSPORTATION**

**GUARDRAIL CONNECTION TO EXISTING END POST TRAILING END SECTION**

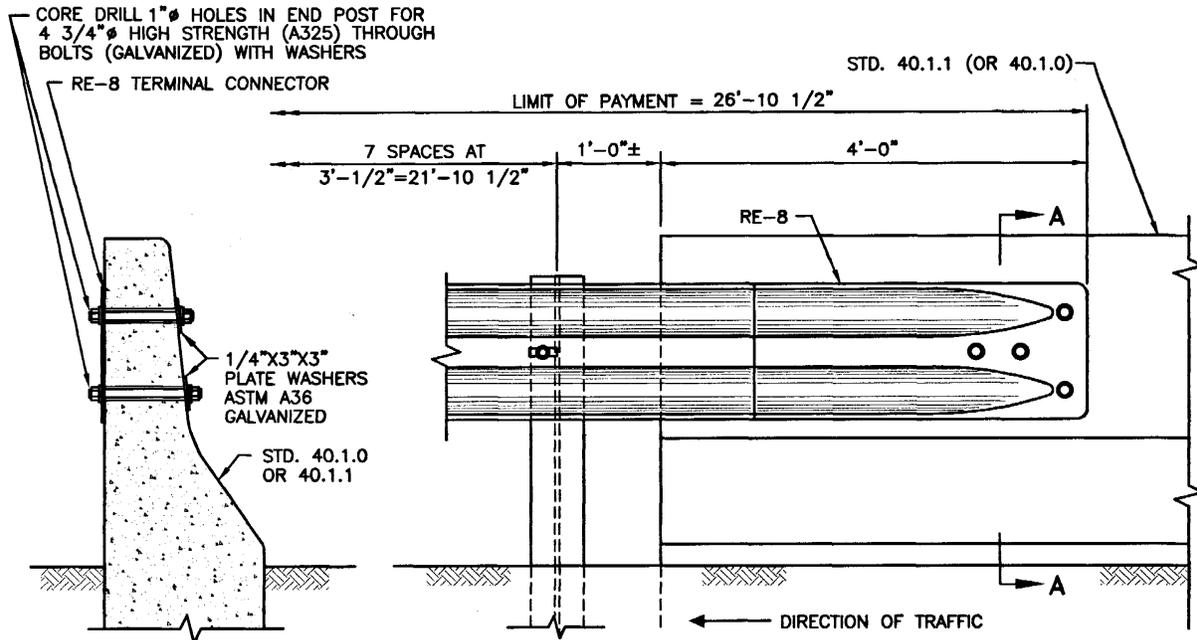
REVISIONS		
NO.	BY	DATE

  
CHIEF ENGINEER  
TRANSPORTATION

  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

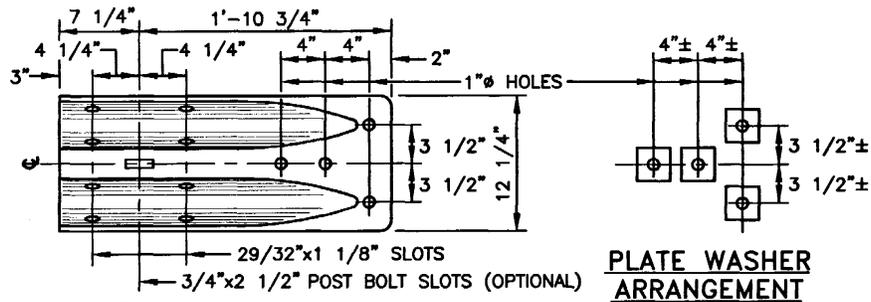
**JUNE 15, 1998**  
ISSUE DATE



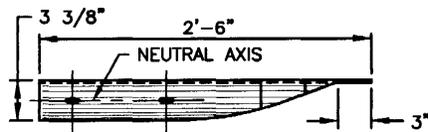


**SECTION A-A**

**ELEVATION**



**PLATE WASHER ARRANGEMENT**



**TERMINAL CONNECTOR (RE-8)**

**NOTES:**

1. SHALL BE IN ACCORDANCE WITH SECTION 901 OF THE R.I. STANDARD SPECIFICATIONS.
2. TERMINAL CONNECTOR, GUARDRAIL, POSTS, BRACKETS, ALL HARDWARE, HUTS, BOLTS, WASHERS, DRILLING AND ALL OTHER INCIDENTALS NECESSARY TO COMPLETE THE INSTALLATION ARE INCLUDED AS PART OF THIS STANDARD.
3. DIMENSIONAL TOLERANCES NOT SHOWN OR IMPLIED ARE INTENDED TO BE THOSE CONSISTENT WITH THE PROPER FUNCTIONING OF THE PART, INCLUDING ITS APPEARANCE, AND ACCEPTED MANUFACTURING PRACTICES.

**RHODE ISLAND DEPARTMENT OF TRANSPORTATION**

**GUARDRAIL CONNECTION TO BARRIER  
APPROACH END SECTION**

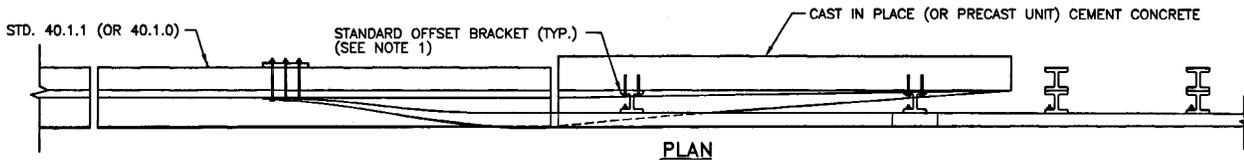
REVISIONS		
NO.	BY	DATE

*James H. Capaldi*  
 CHIEF ENGINEER  
 TRANSPORTATION

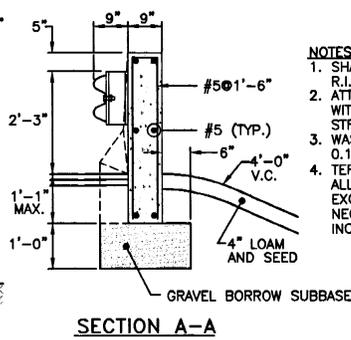
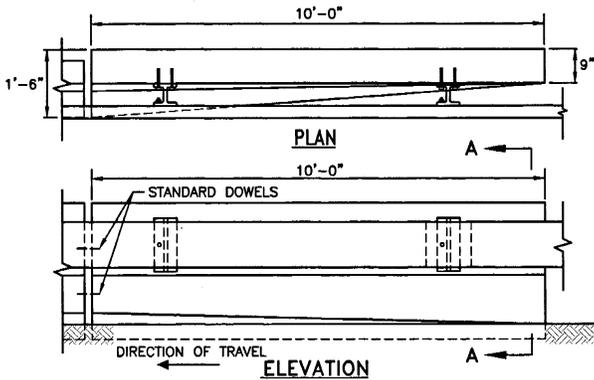
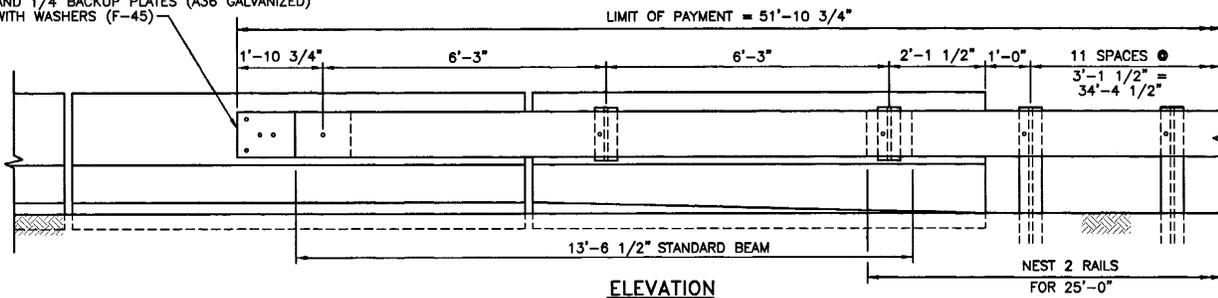
*Edward J. Parkin Jr.*  
 CHIEF DESIGN ENGINEER  
 TRANSPORTATION

JUNE 15, 1998  
 ISSUE DATE





"W" BEAM TERMINAL CONNECTOR RE-8 WITH  
(4) 1/4" Ø HIGH STRENGTH BOLTS (A325 GALVANIZED)  
AND 1/4" BACKUP PLATES (A36 GALVANIZED)  
WITH WASHERS (F-45)



- NOTES:
1. SHALL BE IN ACCORDANCE WITH SECTION 901 OF THE R.I. STANDARD SPECIFICATIONS.
  2. ATTACH EACH STANDARD OFFSET BRACKET TO BARRIER WITH 2 HIGH STRENGTH 3/4" Ø BOLTS AND THREADED STRUCTURAL CONCRETE INSERTS (A325 GALVANIZED).
  3. WASHERS (F-45) SHALL BE 1" I.D., 2" O.D. AND 0.134" THICK.
  4. TERMINAL CONNECTOR, GUARDRAIL POSTS, BRACKETS, ALL HARDWARE, NUTS, BOLTS, WASHERS DRILLING, EXCAVATION, CONCRETE AND ALL OTHER INCIDENTALS NECESSARY TO COMPLETE THE INSTALLATION ARE INCLUDED AS PART OF THIS STANDARD.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION  
GUARDRAIL CONNECTION TO BARRIER  
TRAILING END SECTION

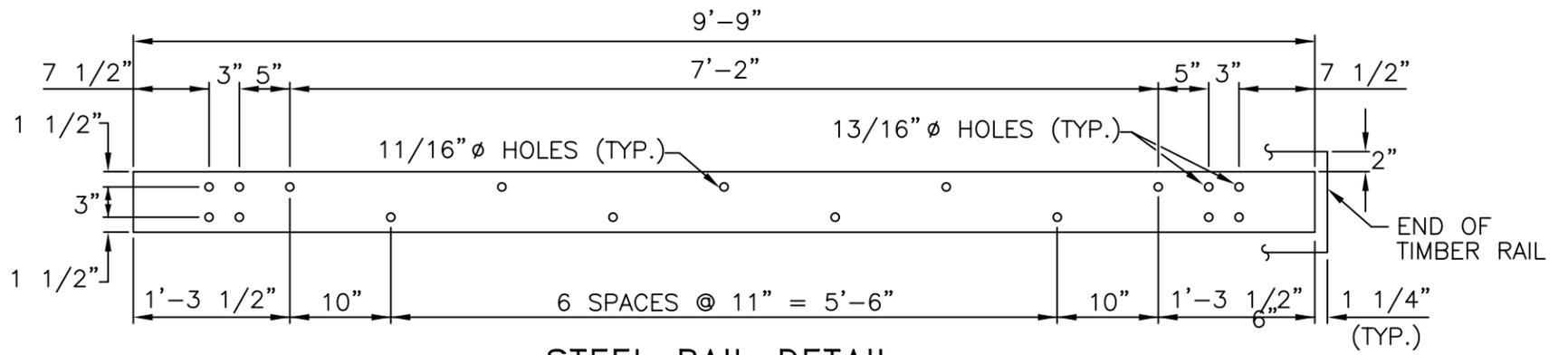
R.I. STANDARD  
34.3.8

JUNE 15, 1998  
ISSUE DATE

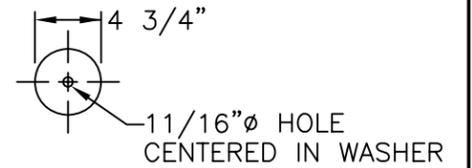
*John P. ...*  
TRANSPORTATION ENGINEER

*John P. ...*  
TRANSPORTATION ENGINEER

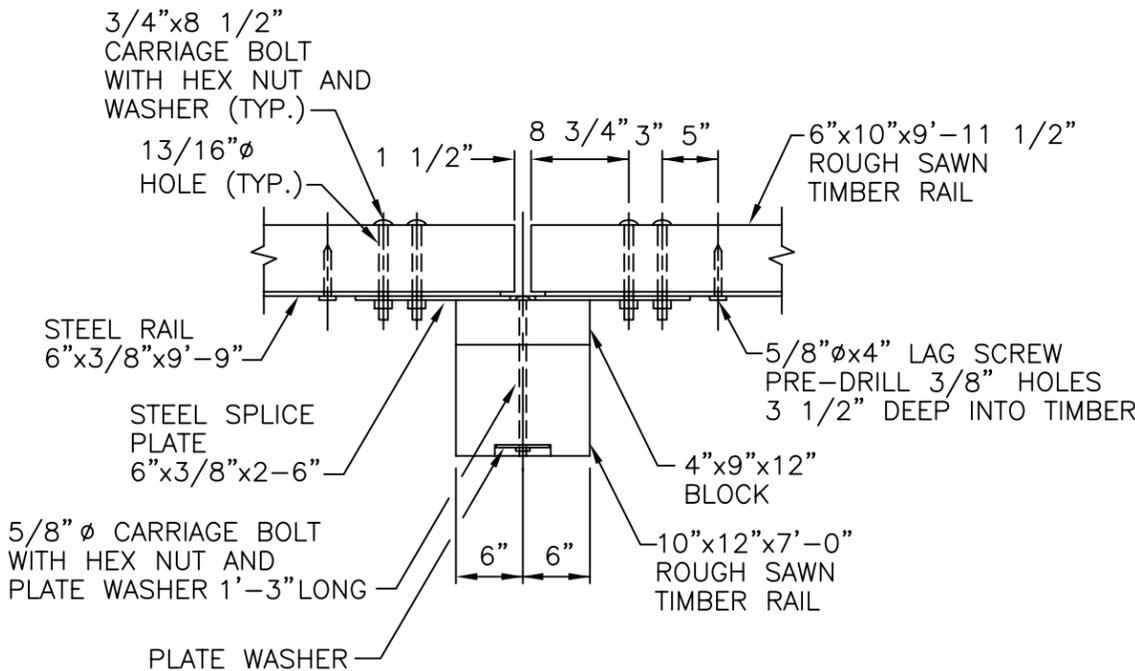
NO.	BY	DATE



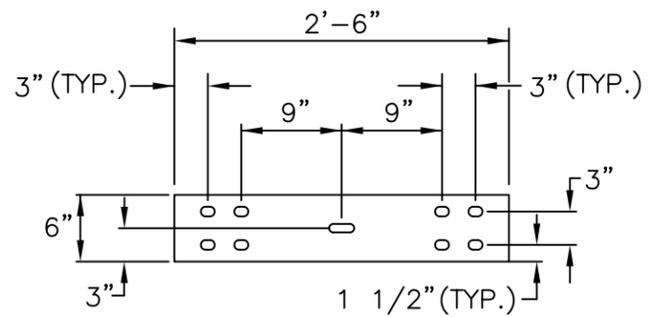
**STEEL RAIL DETAIL**  
6"x3/8"x9'-9"



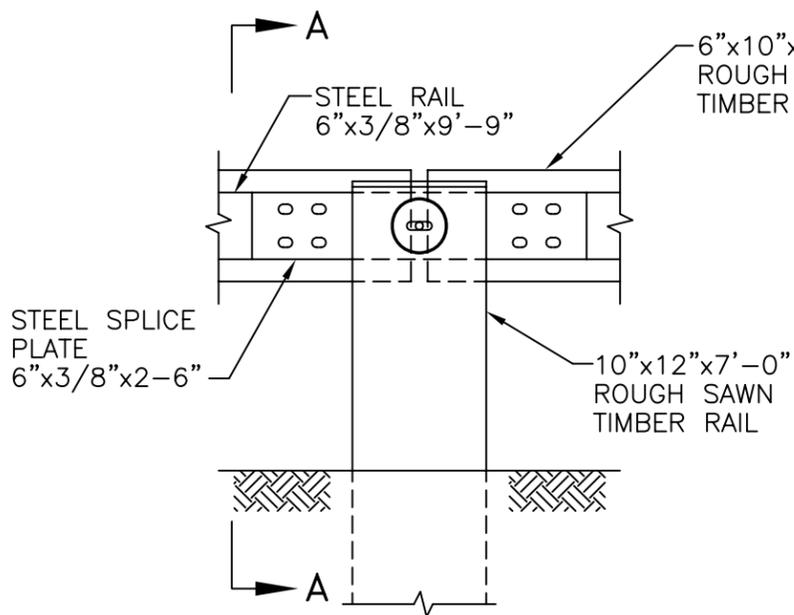
**PLATE WASHER DETAIL**  
4 3/4"Øx1/4"



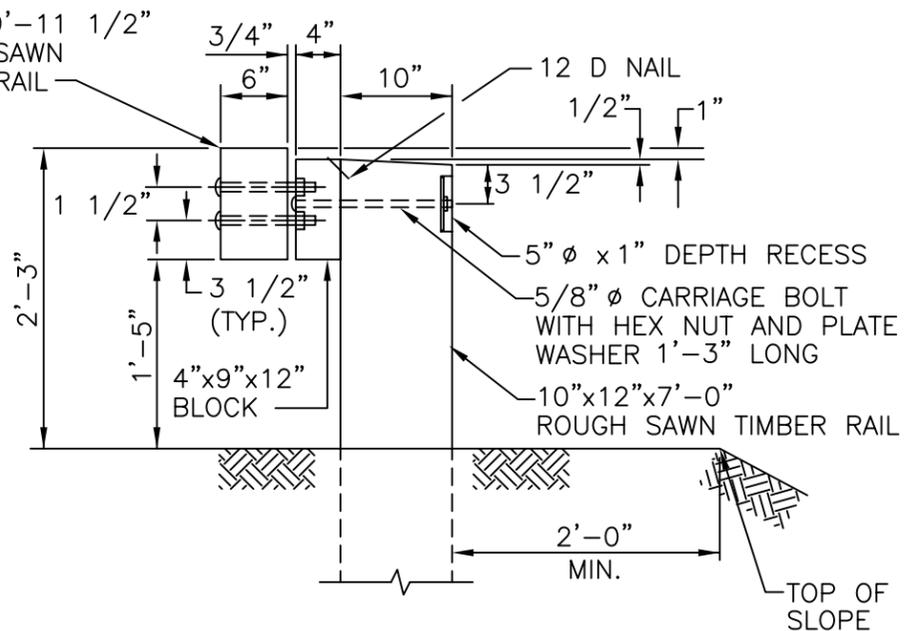
**POST CONNECTION PLAN**



**STEEL SPLICE PLATE DETAIL**  
6"x3/8"x2'-6"



**POST CONNECTION ELEVATION**



**SECTION A-A**

**NOTES:**

1. SHALL BE IN ACCORDANCE WITH SECTION 902 OF THE R.I. STANDARD SPECIFICATIONS.
2. ALL STRUCTURAL STEEL AND FASTENER HARDWARE SHALL BE WEATHERING STEEL AS SPECIFIED.

**RHODE ISLAND DEPARTMENT OF TRANSPORTATION**

**STEEL BACKED TIMBER GUARDRAIL**

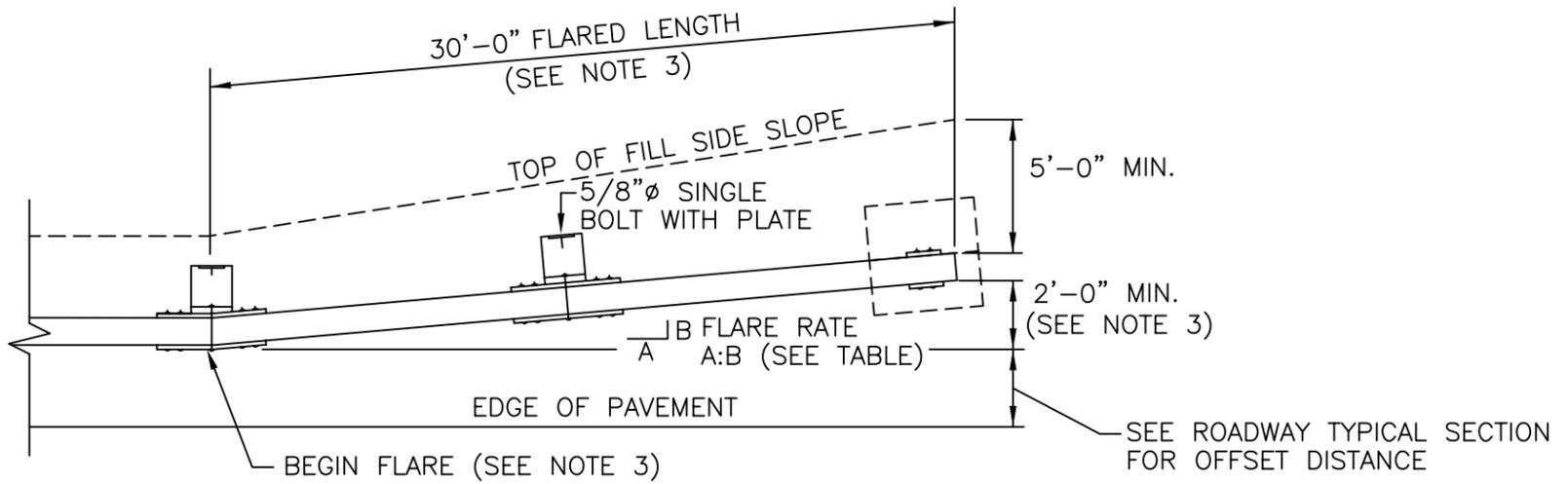
REVISIONS		
NO.	BY	DATE
1	MLP	3/1/2005

*James H. Casabadi*  
 CHIEF ENGINEER  
 TRANSPORTATION

*Edmund J. Parker Jr.*  
 CHIEF DESIGN ENGINEER  
 TRANSPORTATION

JUNE 15, 1998  
 ISSUE DATE

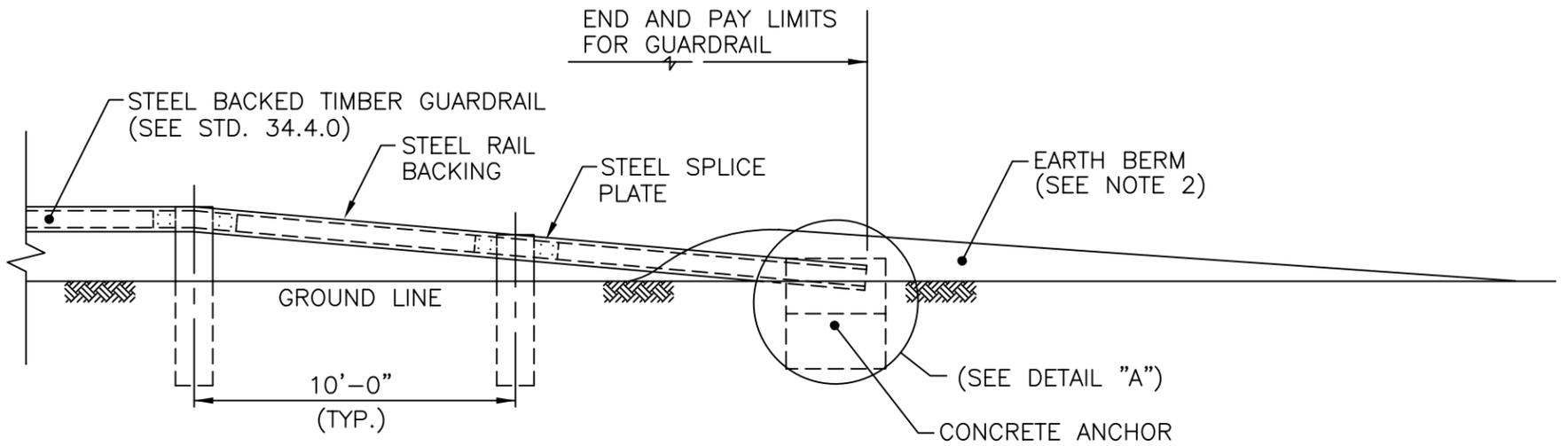




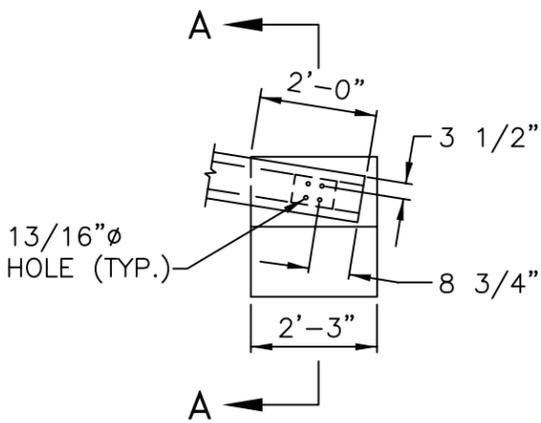
**PLAN**

DESIGN SPEED (MPH)	FLARE RATE A:B
60	13:1
50	11:1
40	9:1
30 OR LESS	7:1

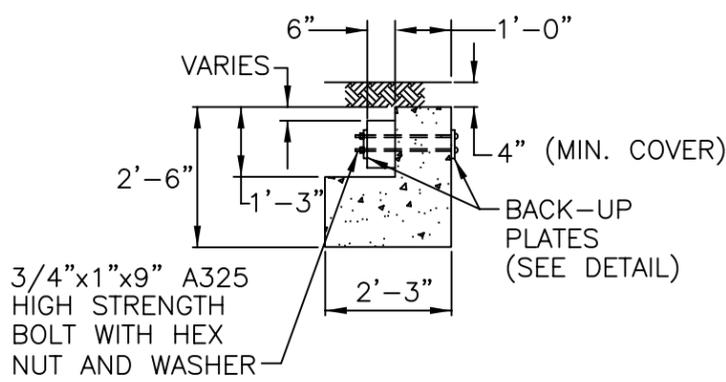
**GUARDRAIL FLARE RATES**



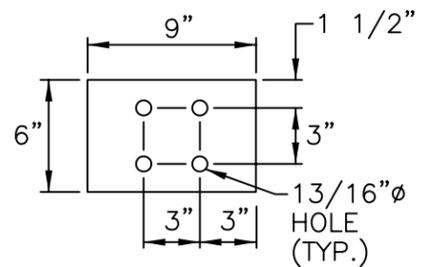
**ELEVATION**



**DETAIL "A"**



**SECTION A-A**



**BACK-UP PLATE DETAIL  
6" x 1 1/2" x 9"**

**NOTES:**

1. SHALL BE IN ACCORDANCE WITH SECTION 902 OF THE R.I. STANDARD SPECIFICATIONS.
2. REFERENCE STD. 34.3.0 FOR CONSTRUCTION OF EARTH BERM.
3. THE GUARDRAIL FLARE SHOWN IN THE PLAN VIEW IS THE MINIMUM LENGTH AND RATE REQUIRED. AS DIRECTED BY THE ENGINEER, THE GUARDRAIL SHOULD BE FLARED SO THE TERMINAL SECTION IS OUTSIDE THE CLEAR ZONE. WHEN THIS IS NOT PRACTICAL, IT SHOULD BE FLARED AS FAR FROM THE ROAD AS PRACTICAL AT THE MAXIMUM RATE INDICATED ON THE GUARDRAIL FLARE RATE TABLE.
4. REFERENCE STD. 34.4.0 FOR TIMBER, STRUCTURAL STEEL AND HARDWARE DETAILS.
5. THE BLOCKS SHALL BE INCLUDED IN THE TERMINAL SECTION, EXCEPT ON THE CONCRETE ANCHOR.

**RHODE ISLAND DEPARTMENT OF TRANSPORTATION**

**STEEL BACKED TIMBER GUARDRAIL  
TERMINAL SECTION - TYPE 1**

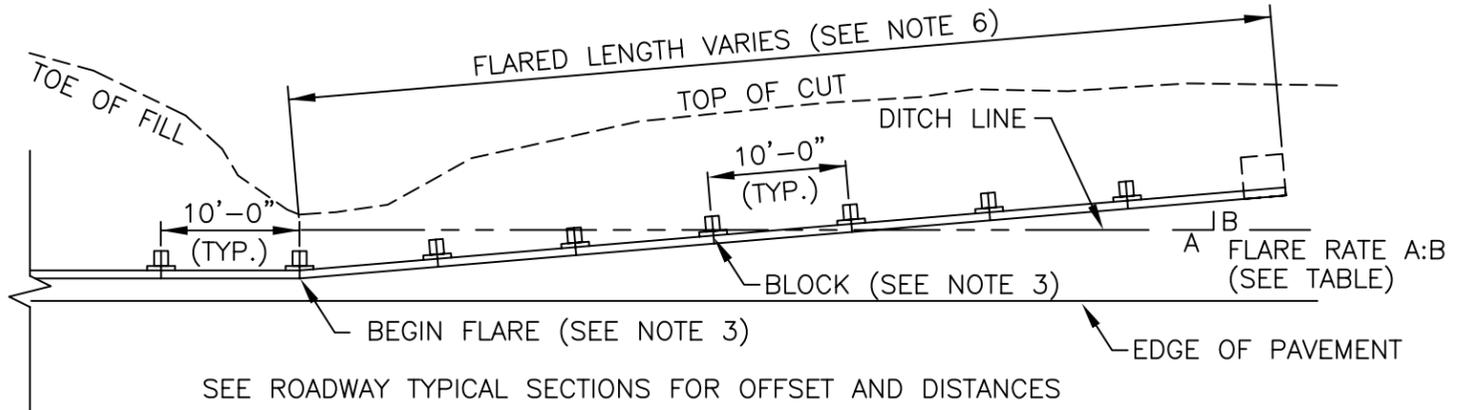
REVISIONS		
NO.	BY	DATE
1	MLP	3/1/2005

*James A. Capaldi*  
CHIEF ENGINEER  
TRANSPORTATION

*Edmund J. Parker Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

JUNE 15, 1998  
ISSUE DATE

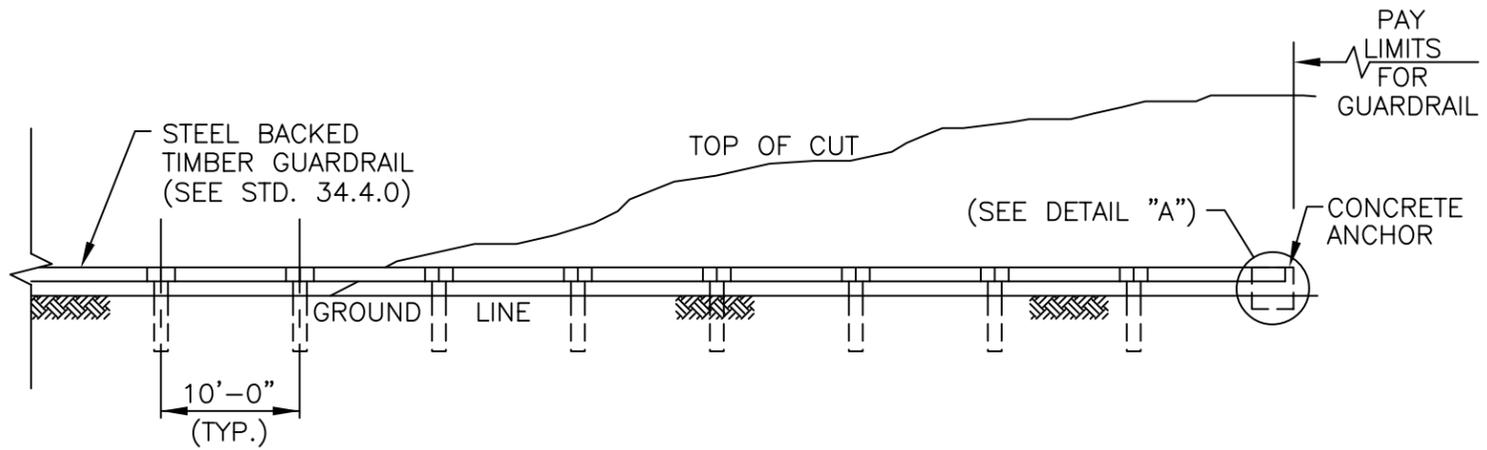




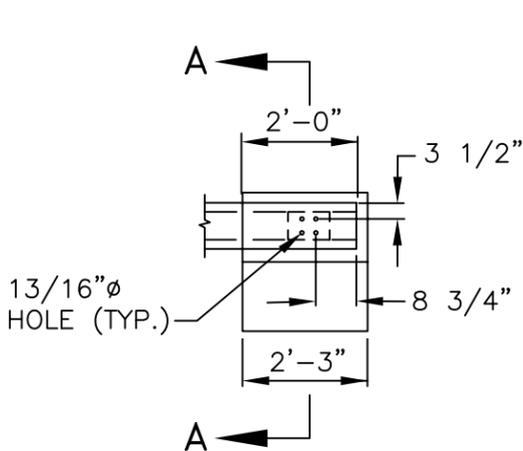
**PLAN**

DESIGN SPEED (MPH)	FLARE RATE A:B
40	9:1
30 OR LESS	7:1

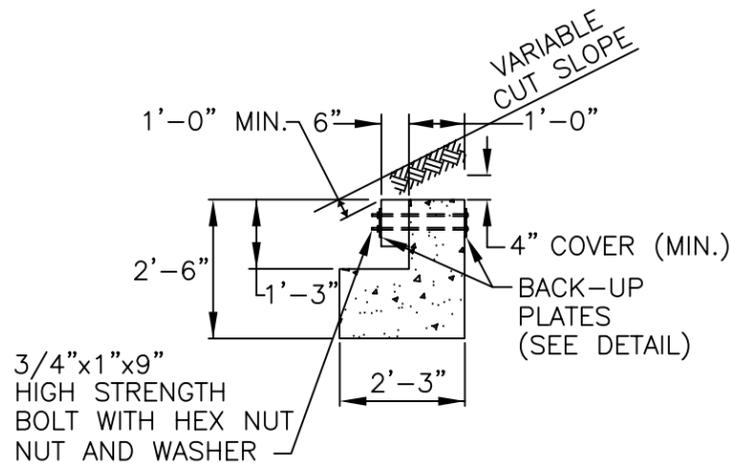
**GUARDRAIL FLARE RATES**



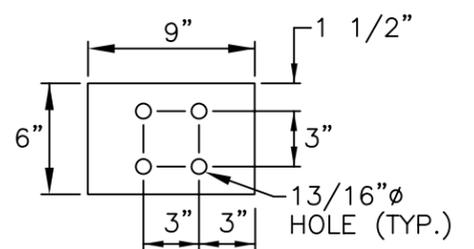
**ELEVATION**



**DETAIL "A"**



**SECTION A-A**



**BACK-UP PLATE  
DETAIL  
6" x 1/2" x 9"**

**NOTES:**

1. SHALL BE IN ACCORDANCE WITH SECTION 902 OF THE R.I. STANDARD SPECIFICATIONS.
2. THIS STANDARD IS NOT TO BE USED WHEN THE DESIGN SPEED EXCEEDS 45 MPH.
3. SEE STD. 34.4.0 STEEL BACKED TIMBER GUARDRAIL, FOR TIMBER, STRUCTURAL STEEL AND HARDWARE DETAILS.
4. THE BLOCKS SHALL BE INCLUDED IN THE TERMINAL SECTION, EXCEPT ON THE CONCRETE ANCHOR.
5. CUT FLARES SHALL BEGIN AT THE NEAREST POST TO A TRANSITION POINT BETWEEN FILL AND CUT AS DIRECTED BY THE ENGINEER.
6. THE FLARE SHALL BE EXTENDED INTO THE CUT UNTIL A MINIMUM OF 1'-0" COVER IS OBTAINED OVER THE GUARDRAIL END.

**RHODE ISLAND DEPARTMENT OF TRANSPORTATION**

**STEEL BACKED TIMBER GUARDRAIL  
TERMINAL SECTION - TYPE 2**

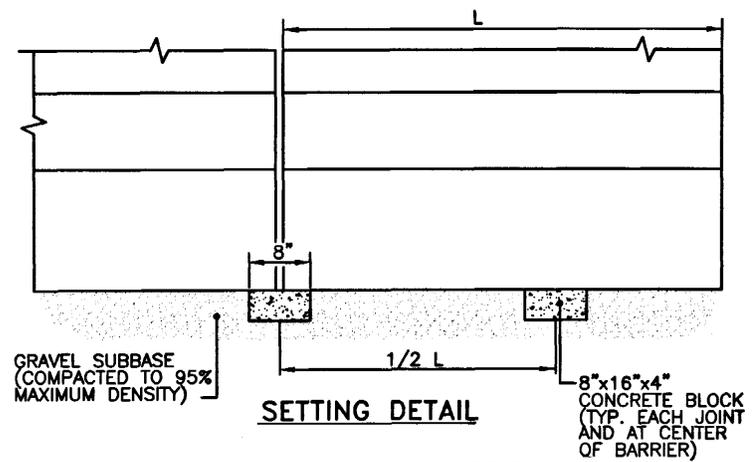
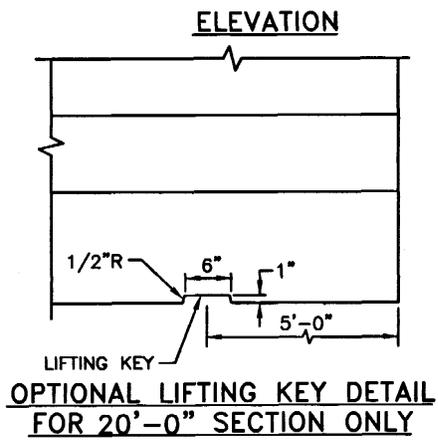
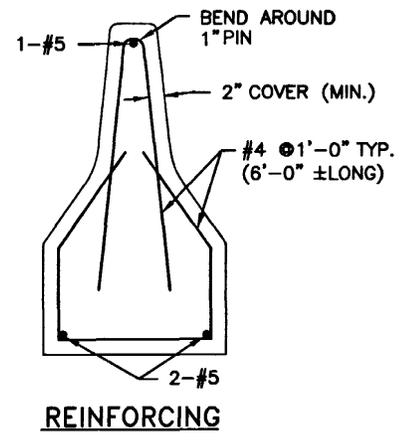
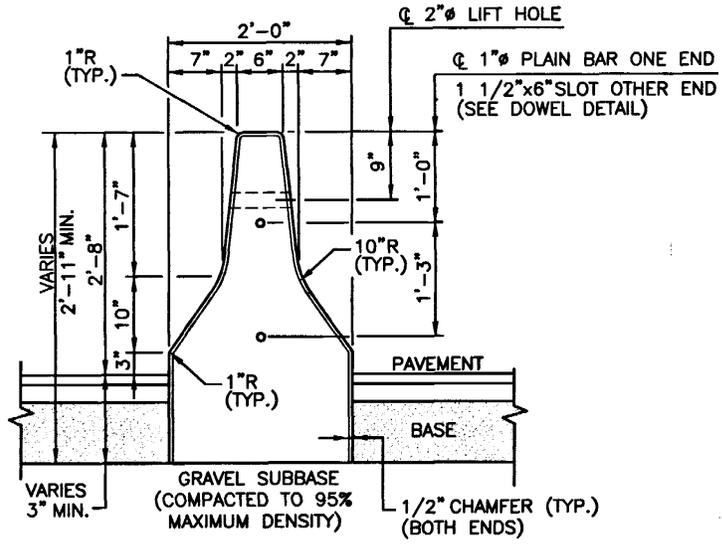
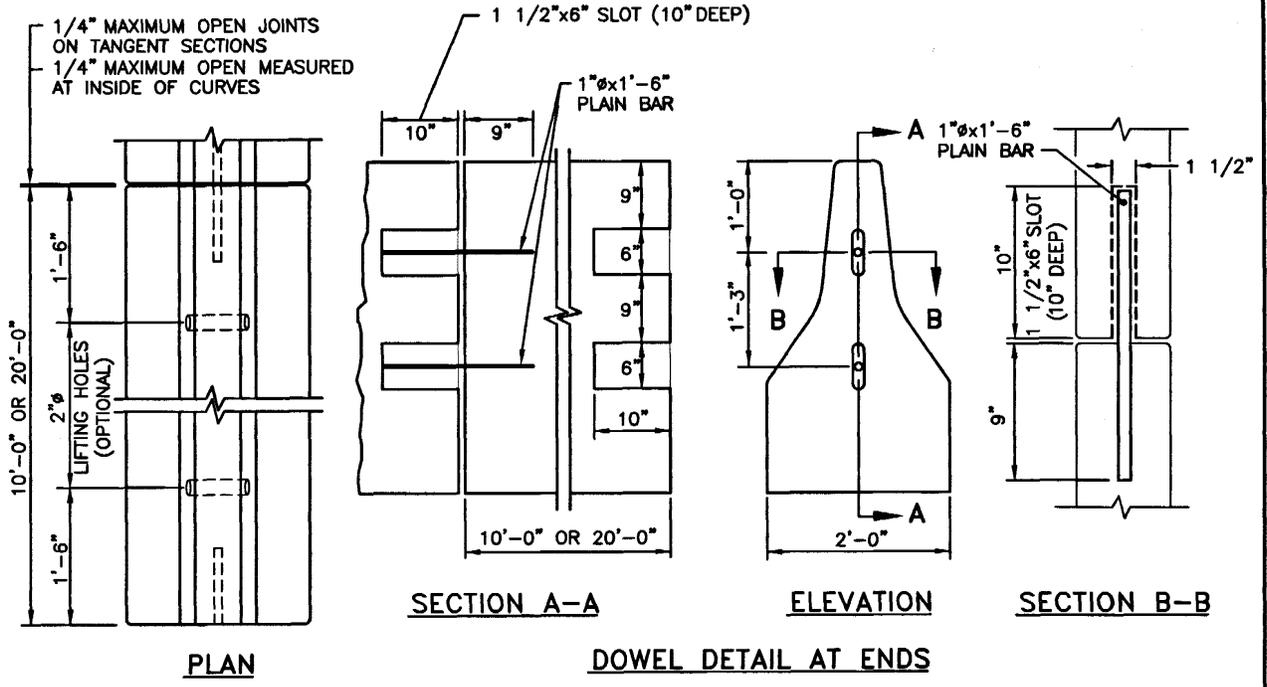
REVISIONS		
NO.	BY	DATE
1	MLP	3/1/2005

*Jean A. Casale*  
CHIEF ENGINEER  
TRANSPORTATION

*Edmund J. Parker Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

JUNE 15, 1998  
ISSUE DATE





NOTE: SHALL BE IN ACCORDANCE WITH SECTION 909 OF THE R.I. STANDARD SPECIFICATIONS.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE

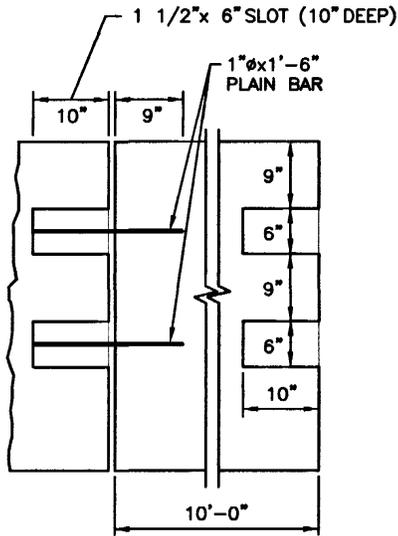
DOUBLE-FACED PRECAST MEDIAN BARRIER

*John A. Cignelli*  
CHIEF ENGINEER  
TRANSPORTATION

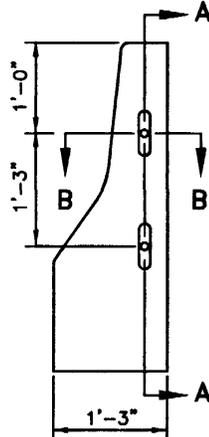
*Edward R. Parker*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

JUNE 15, 1998  
ISSUE DATE

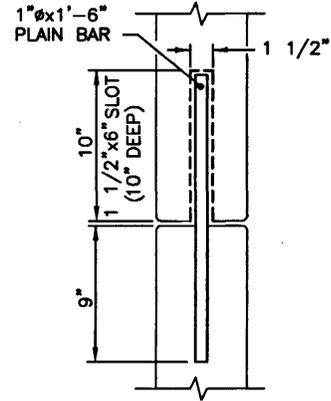




SECTION A-A



ELEVATION

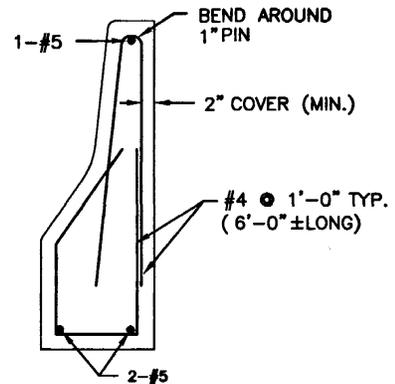


SECTION B-B

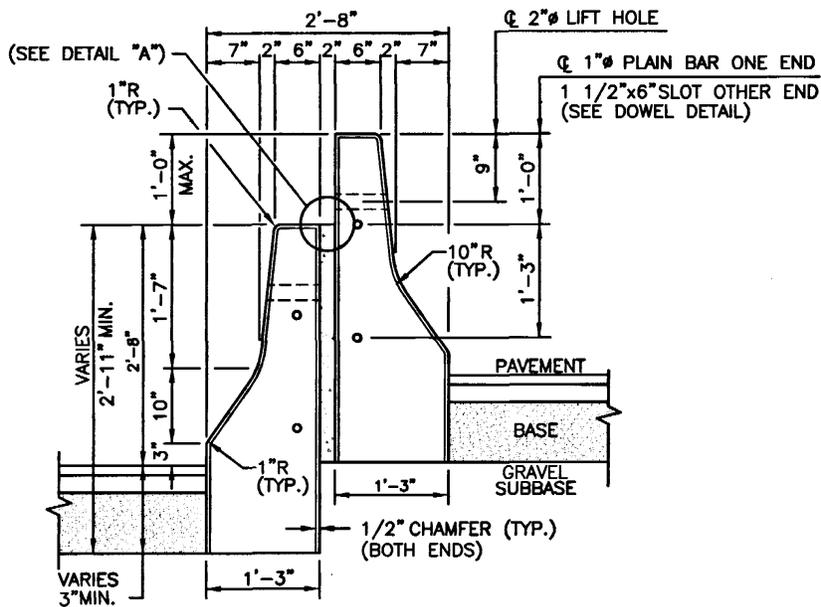
**DOWEL DETAIL AT ENDS**



DETAIL "A"

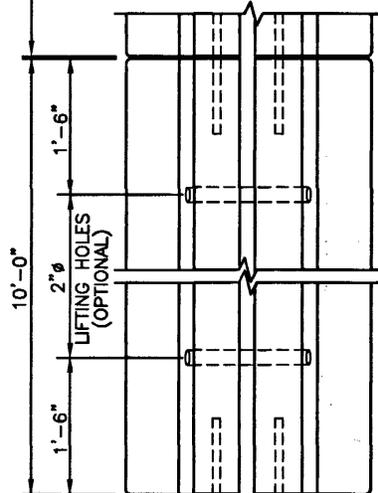


**REINFORCING**



ELEVATION

1/4" MAXIMUM OPEN JOINTS ON TANGENT SECTIONS  
1/4" MAXIMUM OPEN MEASURED AT INSIDE OF CURVES



PLAN

- NOTES:**  
 1. SHALL BE IN ACCORDANCE WITH SECTION 909 OF THE R.I. STANDARD SPECIFICATIONS.  
 2. UNIT SHALL BE SUPPORTED BY CONCRETE SETTING BLOCKS (SEE STD. 40.1.0).

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

**SINGLE-FACED PRECAST MEDIAN BARRIER**

REVISIONS		
NO.	BY	DATE

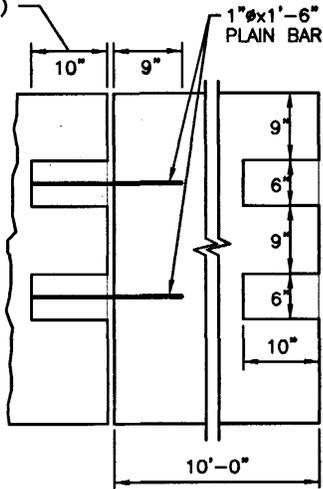
*James P. Capaldi*  
 CHIEF ENGINEER  
 TRANSPORTATION

*Edward J. Parkin*  
 CHIEF DESIGN ENGINEER  
 TRANSPORTATION

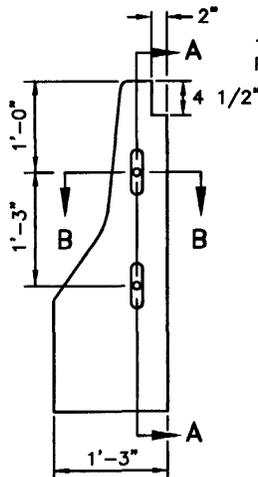
JUNE 15, 1998  
 ISSUE DATE



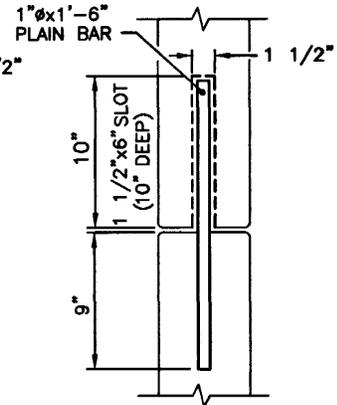
1 1/2" x 6"  
SLOT (10" DEEP)



SECTION A-A

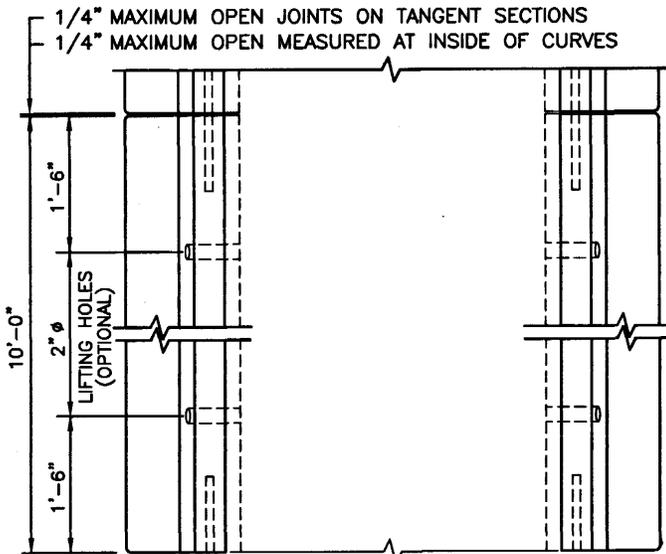


ELEVATION

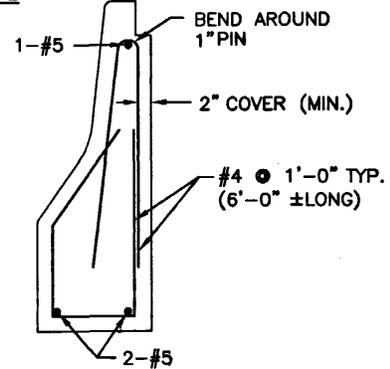


SECTION B-B

**DOWEL DETAIL AT ENDS**



PLAN

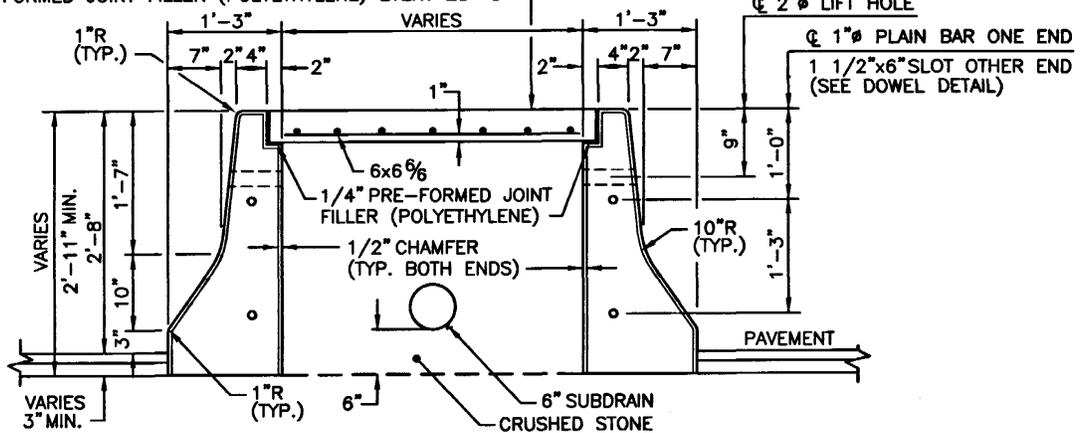


REINFORCING

**NOTES:**

1. SHALL BE IN ACCORDANCE WITH SECTION 909 OF THE R.I. STANDARD SPECIFICATIONS.
2. UNIT SHALL BE SUPPORTED BY CONCRETE SETTING BLOCKS (SEE STD. 40.1.0).
3. SUBDRAIN SHALL BE TIED INTO THE DRAINAGE SYSTEM.

4" CAST IN PLACE CEMENT CONCRETE WITH EXPANSION JOINTS AND 1/4" PRE-FORMED JOINT FILLER (POLYETHYLENE) EVERY 25'-0"



ELEVATION

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

**SINGLE-FACED PRECAST MEDIAN BARRIER**

REVISIONS		
NO.	BY	DATE

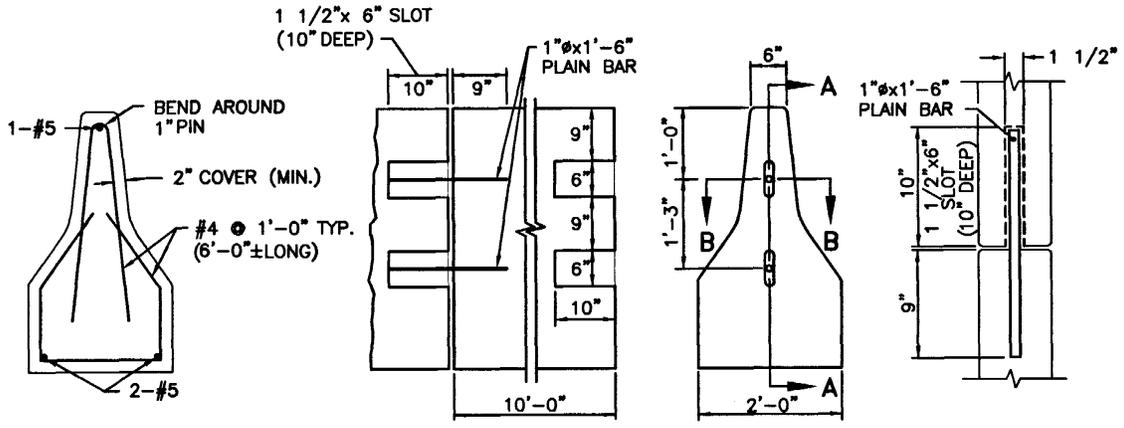
*James A. Gagliardi*  
CHIEF ENGINEER  
TRANSPORTATION

*Edward J. Parkes*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

JUNE 15, 1998  
ISSUE DATE







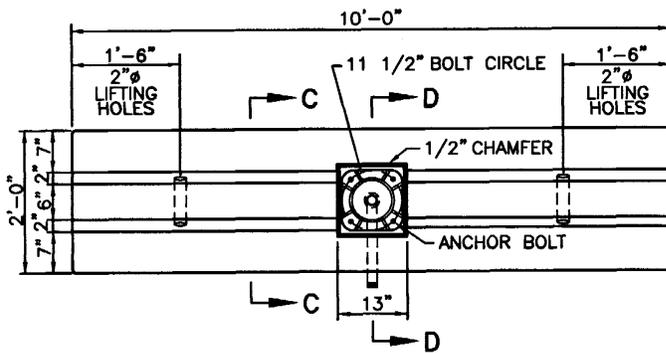
**REINFORCING**

**SECTION A-A**

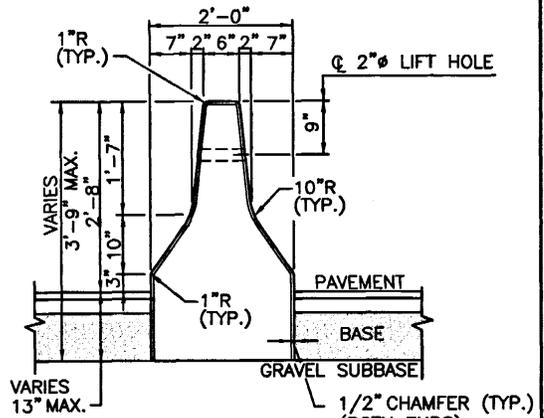
**ELEVATION**

**SECTION B-B**

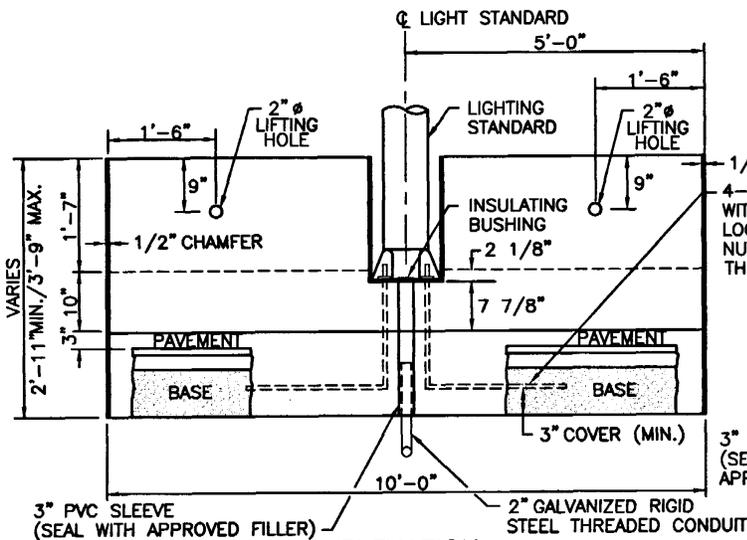
**DOWEL DETAIL AT ENDS**



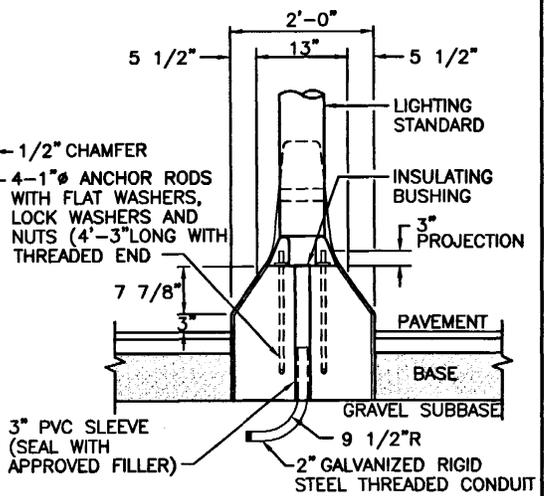
**PLAN**



**SECTION C-C**



**ELEVATION**



**SECTION D-D**

**NOTE:**  
SHALL BE IN ACCORDANCE WITH SECTION 909 OF THE R.I. STANDARD SPECIFICATIONS.

**RHODE ISLAND DEPARTMENT OF TRANSPORTATION**

**PRECAST MEDIAN BARRIER FOR LIGHT STANDARD**

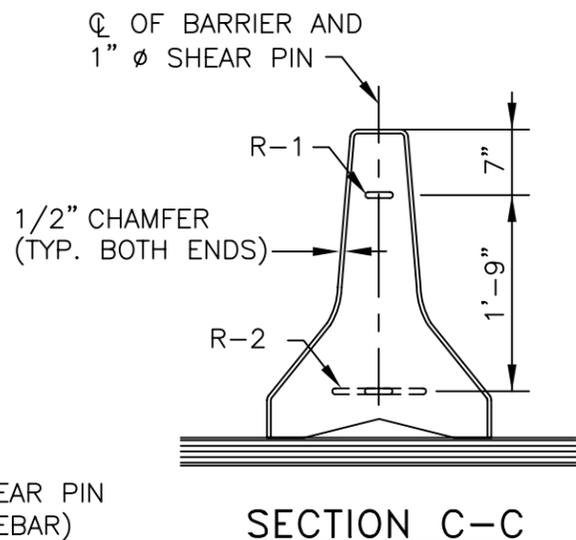
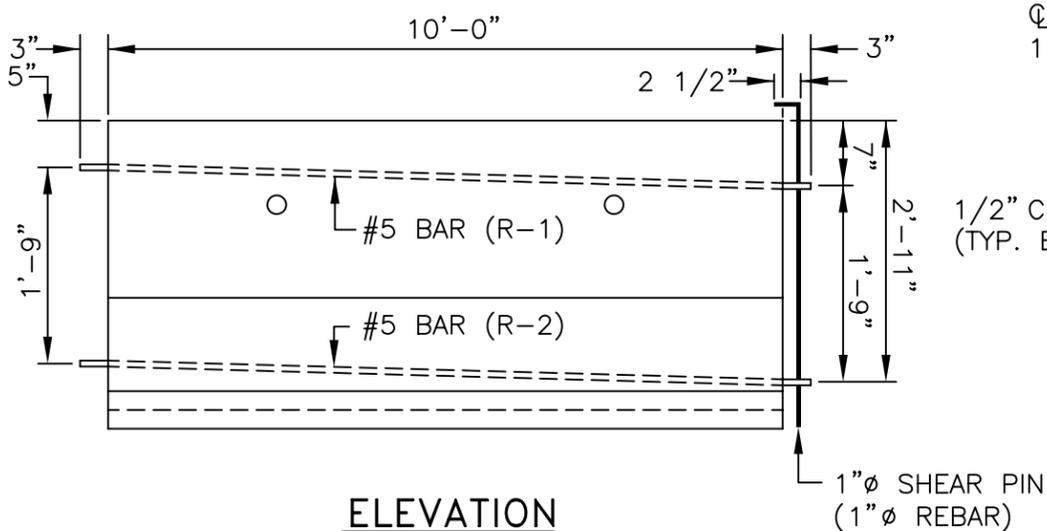
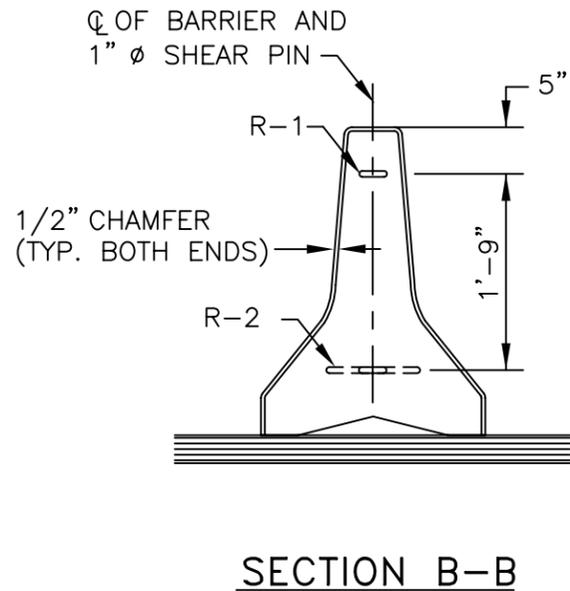
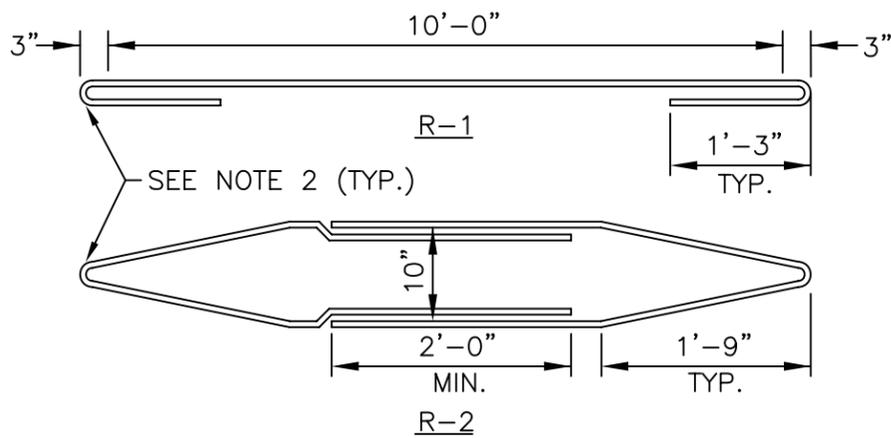
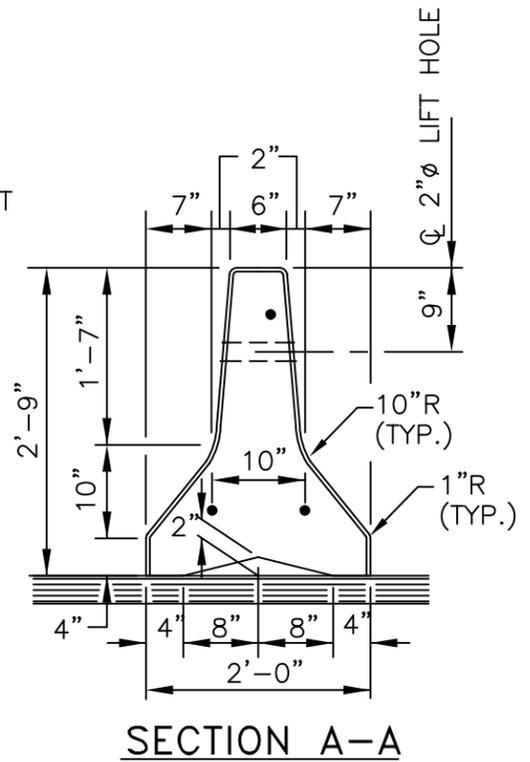
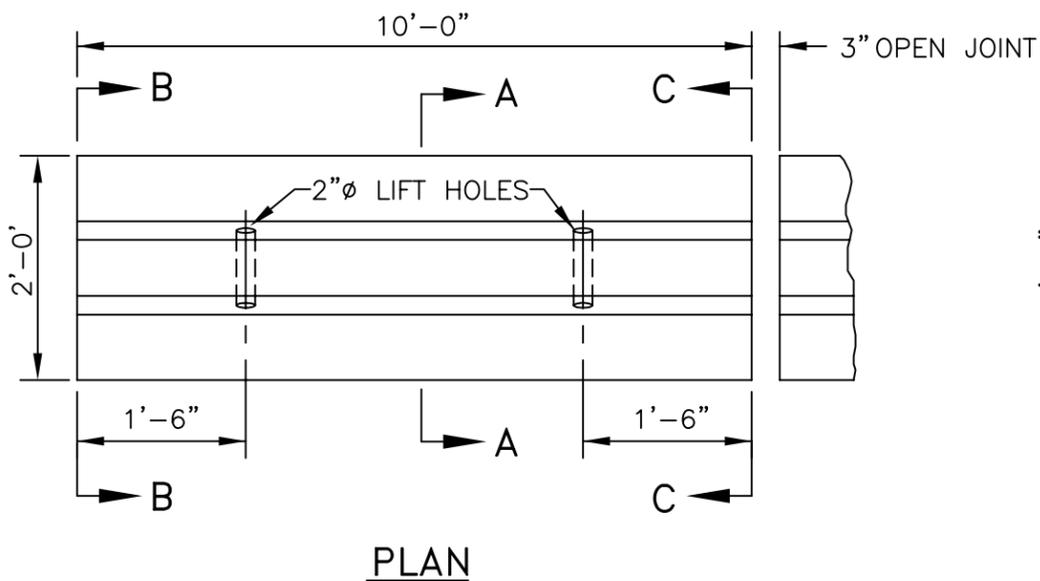
REVISIONS		
NO.	BY	DATE

*James A. Gagliardi*  
CHIEF ENGINEER  
TRANSPORTATION

*Edward P. ...*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

JUNE 15, 1998  
ISSUE DATE

R.I.  
STANDARD  
**40.4.0**



- NOTES:
1. SHALL BE IN ACCORDANCE WITH SECTION 926 OF THE R.I. STANDARD SPECIFICATIONS.
  2. BEND REBARS AROUND A 1 3/8"  $\phi$  PIN.
  3. BARS R-1 SHALL BE FABRICATED CONTINUOUSLY. R-2 BARS SHALL BE FABRICATED WITH 2'-0" MINIMUM LAPS AS SHOWN ON THE DETAIL.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION  
 UNANCHORED PRECAST CONCRETE BARRIER  
 FOR TEMPORARY TRAFFIC CONTROL

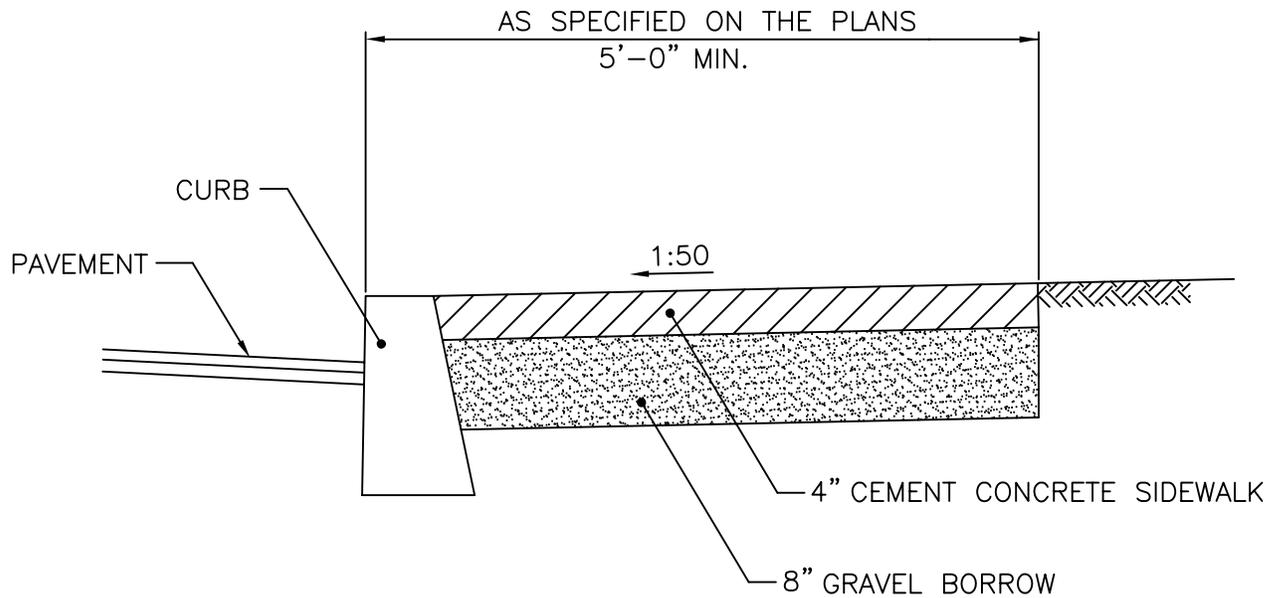
REVISIONS		
NO.	BY	DATE
1	MLP	Oct 05

*James R. Casaldi*  
 CHIEF ENGINEER  
 TRANSPORTATION

*Edmund J. Parker Jr.*  
 CHIEF DESIGN ENGINEER  
 TRANSPORTATION

JUNE 15, 1998  
 ISSUE DATE

R.I.  
 STANDARD  
 40.5.0



NOTES

1. SHALL BE IN ACCORDANCE WITH SECTION 905 OF THE R.I. STANDARD SPECIFICATIONS.
2. FOR CURB SETTING DETAIL REFERENCE STD. 7.6.0.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE
1	MLP	3/1/2005

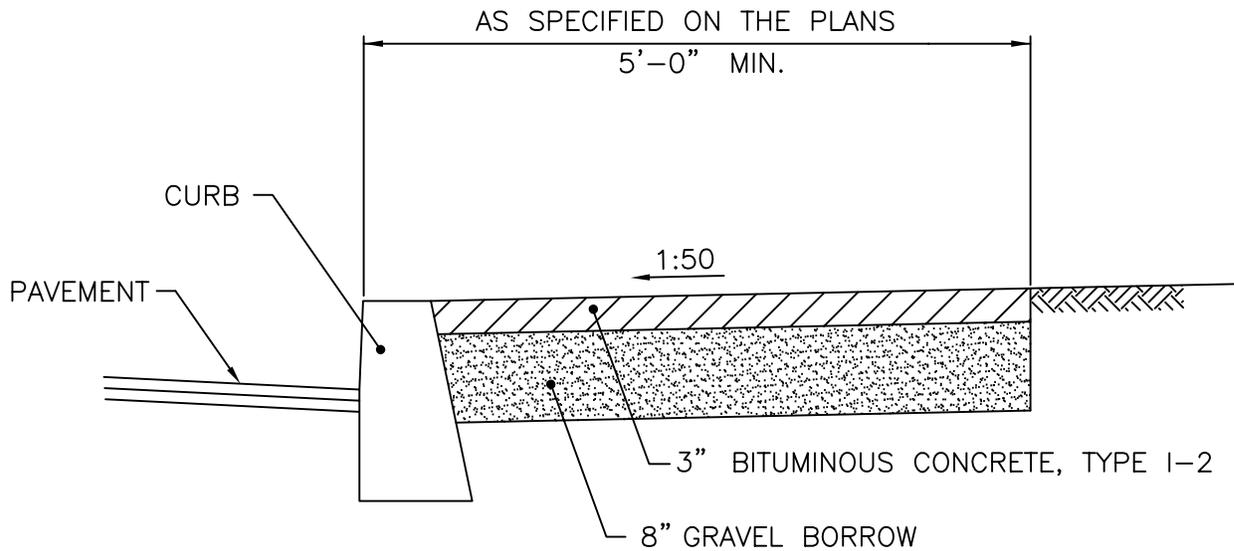
CEMENT CONCRETE SIDEWALK

*James H. Casabadi*  
 CHIEF ENGINEER  
 TRANSPORTATION

*Edmund J. Parker Jr.*  
 CHIEF DESIGN ENGINEER  
 TRANSPORTATION

JUNE 15, 1998  
 ISSUE DATE





NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION 905 OF THE R.I. STANDARD SPECIFICATIONS.
2. FOR CURB SETTING DETAIL REFERENCE STD. 7.6.0.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE
1	MLP	3/1/2005

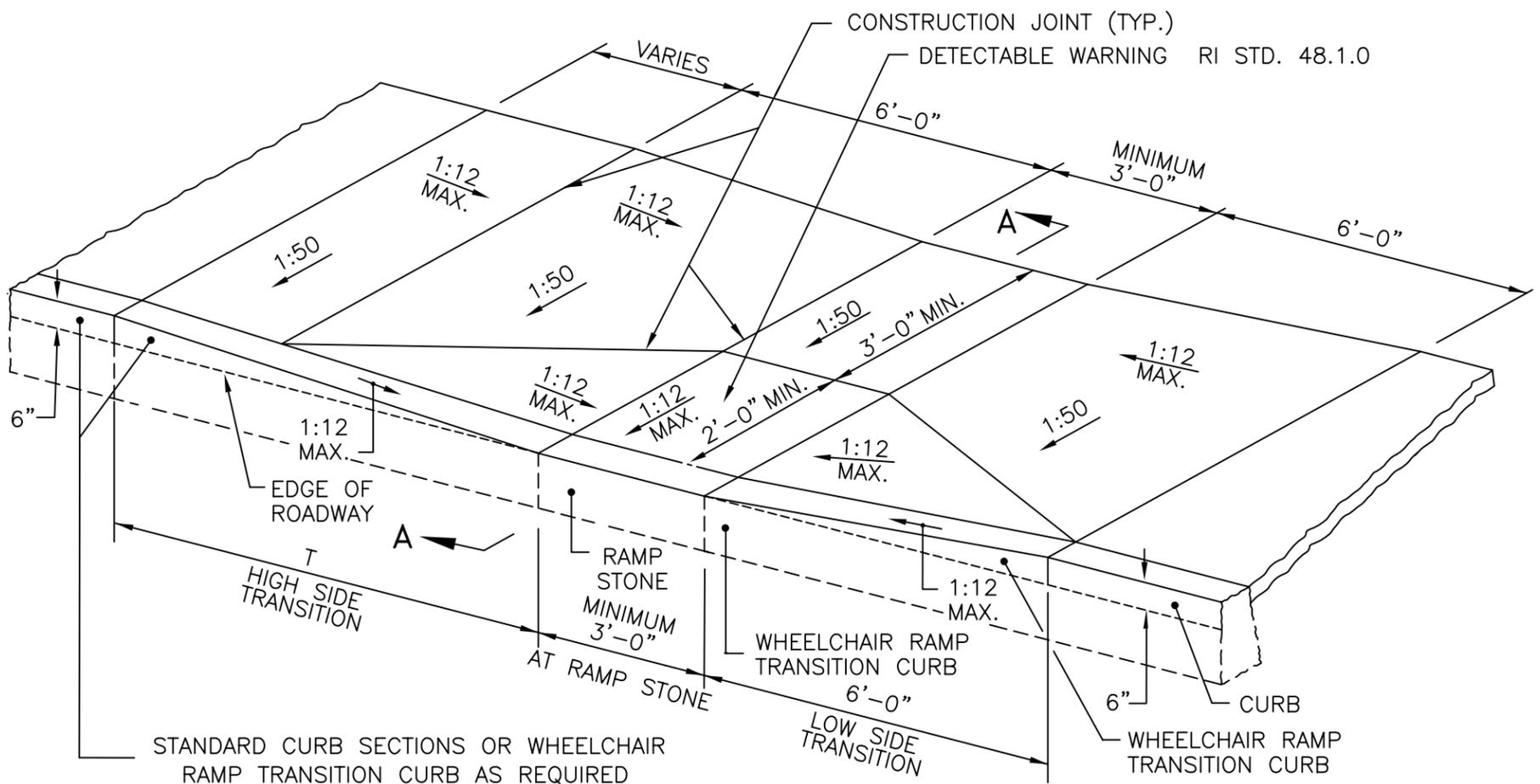
BITUMINOUS CONCRETE SIDEWALK

*James A. Capaldi*  
CHIEF ENGINEER  
TRANSPORTATION

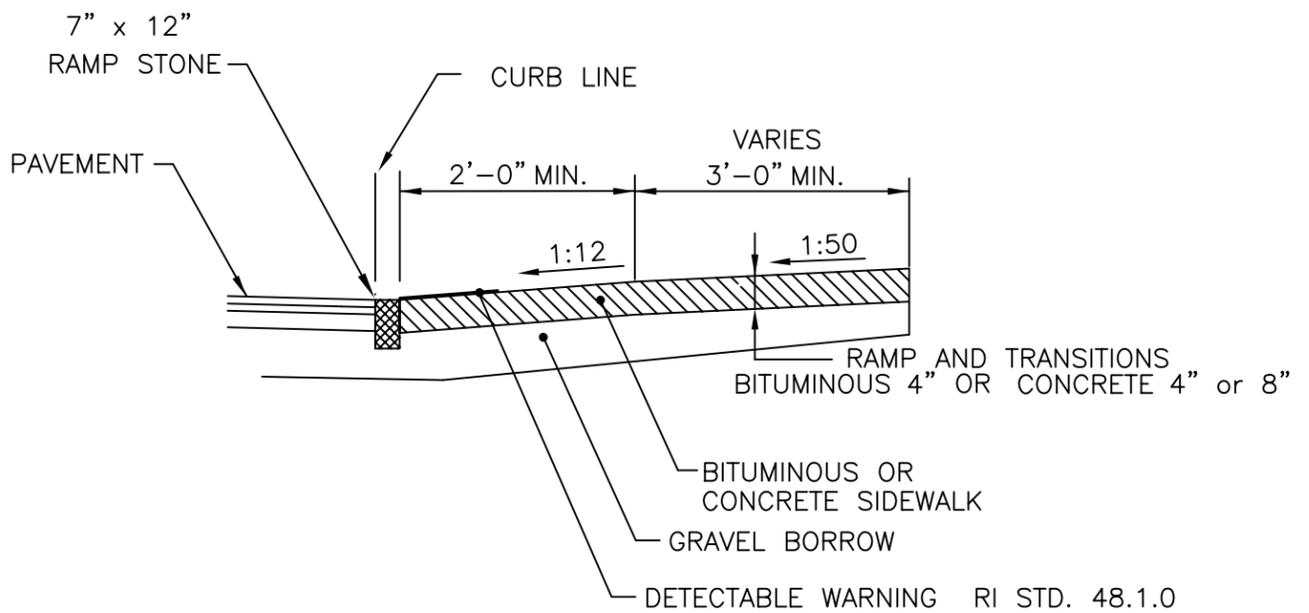
*Edmund J. Parker Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

JUNE 15, 1998  
ISSUE DATE





**ISOMETRIC VIEW**  
NOT TO SCALE



ROADWAY PROFILE GRADE	T (FT.)
0.00	6.0
0.01	7.0
0.02	8.0
0.03	9.5
0.04	11.5
0.05	15.0

**SECTION A-A**  
NOT TO SCALE

**NOTES:**

1. SHALL BE IN ACCORDANCE WITH SECTION 905 OF THE RI STANDARD SPECIFICATIONS.
2. WHEN ANY OBSTRUCTION LOCATED IN THE SIDEWALK FALLS WITHIN A CROSSWALK AREA, THE WHEELCHAIR RAMP WILL BE PLACED SUCH THAT THE OBSTRUCTION FALLS OUTSIDE OF THE RAMP.
3. AT NO TIME IS ANY PART OF THE WHEELCHAIR RAMP TO BE LOCATED OUTSIDE OF THE CROSSWALK, AND IT IS TO BE CENTERED WHENEVER POSSIBLE.
4. DRAINAGE FACILITIES ARE TO BE LOCATED UP-GRADE OF ALL WHEELCHAIR RAMPS.
5. LOCATION OF WHEELCHAIR RAMPS IS AS SHOWN ON CONTRACT DRAWINGS.
6. IN NO INSTANCE SHALL THE SIDEWALK CROSS SLOPE EXCEED 1:50 EXCEPT WITHIN THE RAMP AREA.
7. AN UNOBSTRUCTED PATH OF TRAVEL WITH A MINIMUM WIDTH OF 3'-0" SHALL BE MAINTAINED.
8. THE WHEELCHAIR RAMP SLOPE AND SIDE SLOPES (TRANSITIONS), MUST NOT EXCEED 1:12. HOWEVER, THESE SLOPES MAY BE FLATTER THAN 1:12 WHEN WARRANTED BY SURROUNDING CONDITIONS.
9. WHERE THE ROAD PROFILE EXCEEDS 5% THE HIGH SIDE TRANSITION LENGTH (T) SHALL BE EIGHTEEN FEET (18'-0").
10. IN NO CASE, WHERE A STOP LINE IS WARRANTED, SHALL A RAMP BE PLACED BEHIND THE STOP LINE.
11. THE ENTRANCE OF THE WHEELCHAIR RAMP SHALL BE FLUSH WITH THE ROADWAY.
12. THE WHEELCHAIR RAMP SHALL BE CENTERED RADIALLY, OPPOSITE THE RADIUS POINT WHEN POSSIBLE.
13. MINIMUM LENGTH OF STRAIGHT OR CIRCULAR FILLER PIECES TO BE 3'-0" (GREATER LENGTHS PREFERRED).
14. ALL REQUIRED CUTTING OF CURB PIECES TO BE PAID FOR UNDER COST OF CURB.
15. DETECTABLE WARNINGS TO BE PAID FOR UNDER SECTION 942 OF THE RI STANDARD SPECIFICATIONS
16. 8" CONCRETE DEPTH FOR RADIUS WHEELCHAIR RAMPS ONLY. USE 4" DEPTH FOR TANGENT (MID-BLOCK) LOCATIONS.

**RHODE ISLAND DEPARTMENT OF TRANSPORTATION**

**WHEELCHAIR RAMP**

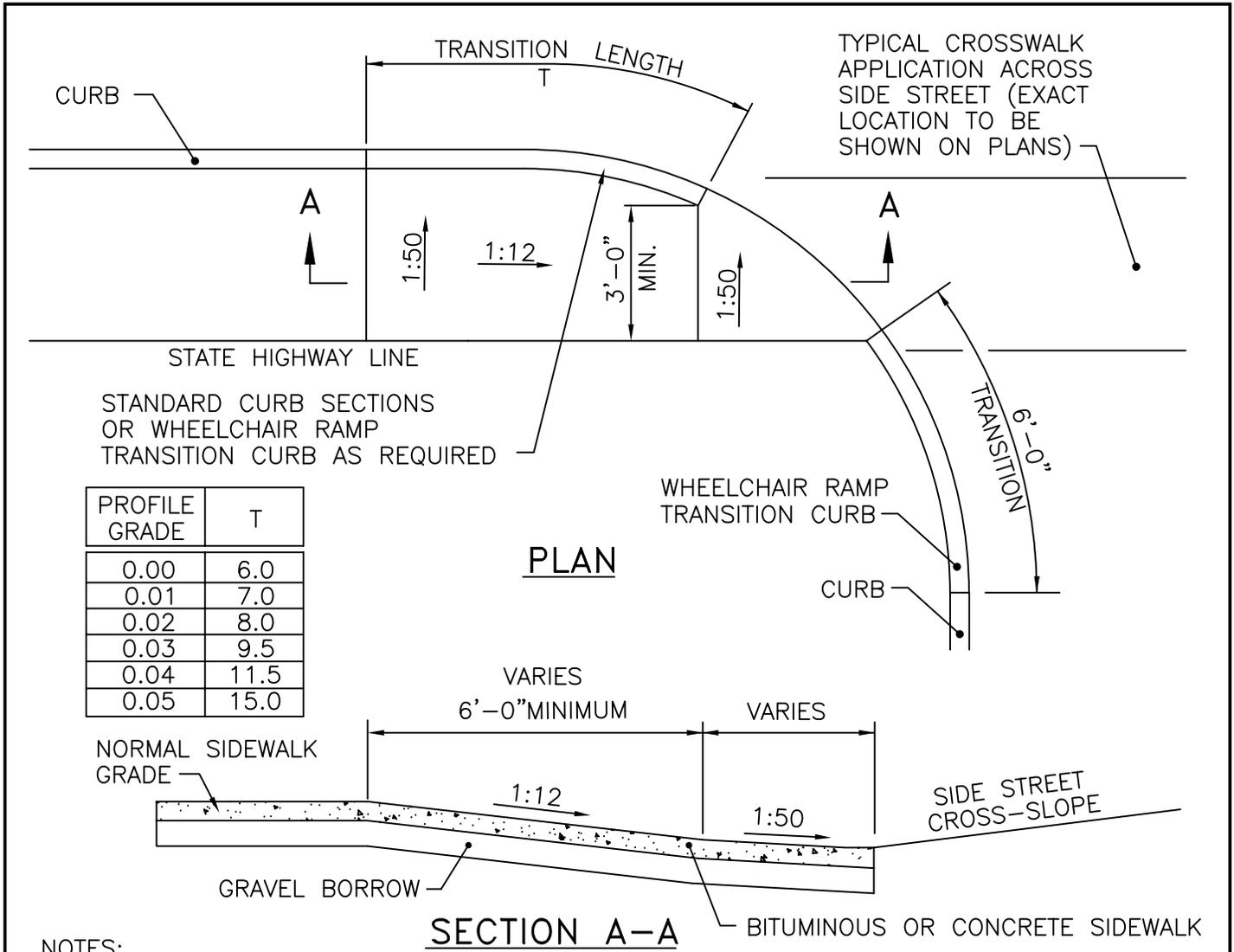
REVISIONS		
NO.	BY	DATE
1	MLP	Oct 05

*John A. Capaldi*  
CHIEF ENGINEER  
TRANSPORTATION

*Edmund J. DeBergh*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

JUNE 15, 1998  
ISSUE DATE

R.I.  
STANDARD  
43.3.0



**NOTES:**

1. SHALL BE IN ACCORDANCE WITH SECTION 905 OF THE R.I. STANDARD SPECIFICATIONS.
2. THIS DETAIL IS TO BE USED ONLY WHEN STATE RIGHT-OF-WAY IS LIMITED TO BACK OF SIDEWALK, AND SIDEWALK IS NARROW WITH NO PEDESTRIAN TRAFFIC FROM SIDE STREET.
3. WHEN ANY OBSTRUCTION LOCATED IN THE SIDEWALK FALLS WITHIN A CROSSWALK AREA, IF POSSIBLE, THE OBSTRUCTION WILL BE PLACED SUCH THAT IT FALLS OUTSIDE OF THE RAMP.
4. AT NO TIME IS ANY PART OF THE WHEELCHAIR RAMP TO BE LOCATED OUTSIDE OF THE CROSSWALK, AND IT IS TO BE CENTERED WHENEVER POSSIBLE.
5. DRAINAGE FACILITIES ARE TO BE LOCATED UP-GRADE OF ALL WHEELCHAIR RAMPS.
6. LOCATION OF WHEELCHAIR RAMPS IS AS SHOWN ON CONTRACT DRAWINGS.
7. ALL REQUIRED CUTTING OF CURB PIECES TO BE PAID FOR UNDER COST OF CURB.
8. WHERE THE ROAD PROFILE EXCEEDS 5% THE TRANSITION LENGTH (T) SHALL BE EIGHTEEN FEET (18'-0").
9. THE ENTRANCE OF THE WHEELCHAIR RAMP SHALL BE FLUSH WITH THE ROADWAY.
10. MINIMUM LENGTH OF STRAIGHT OR CIRCULAR FILLER PIECES TO BE 3'-0" (GREATER LENGTHS PREFERRED).
11. AN UNOBSTRUCTED PATH OF TRAVEL WITH A MINIMUM WIDTH OF 3'-0" SHALL BE MAINTAINED.

**RHODE ISLAND DEPARTMENT OF TRANSPORTATION**

**WHEELCHAIR RAMP  
FOR LIMITED RIGHT-OF-WAY AREAS**

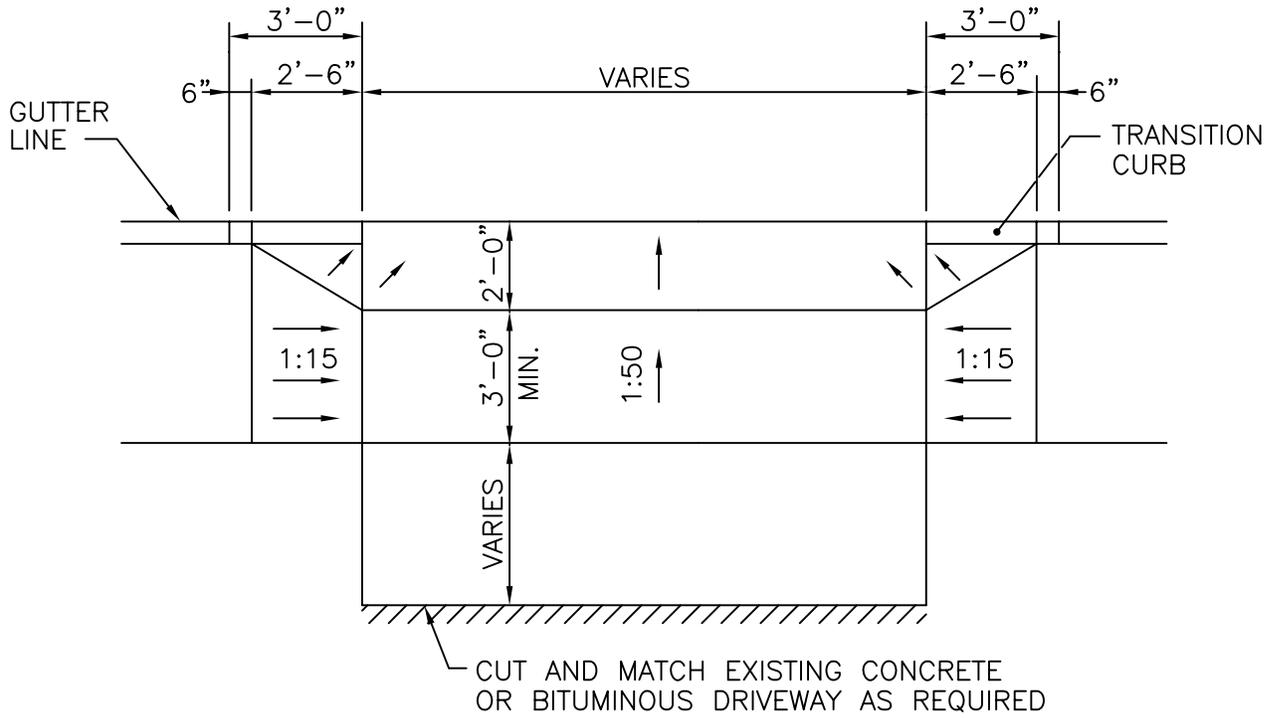
REVISIONS		
NO.	BY	DATE
1	MLP	Dec 05

*James A. Casabadi*  
CHIEF ENGINEER  
TRANSPORTATION

*Edmund Parker Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

JUNE 15, 1998  
ISSUE DATE

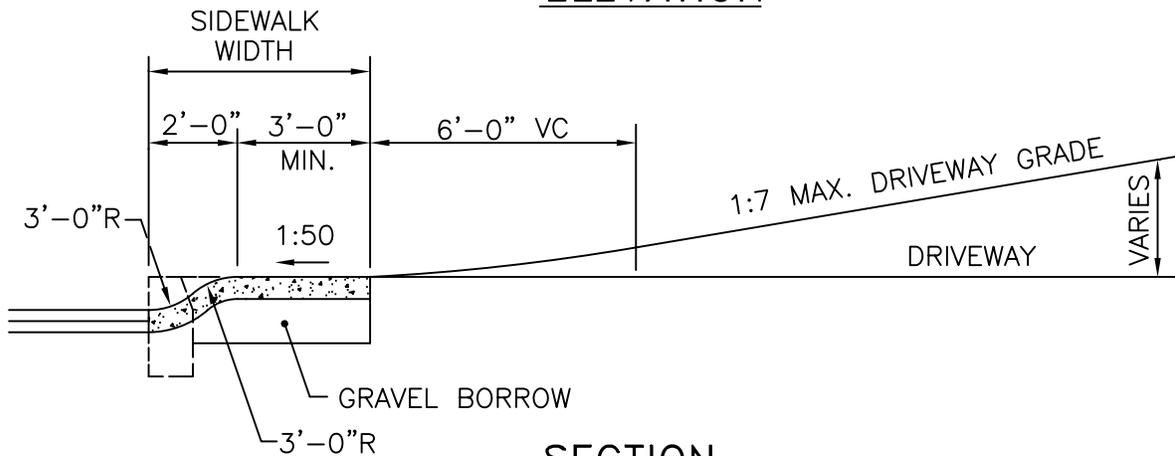




PLAN



ELEVATION



SECTION

NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION 905 OF THE R.I. STANDARD SPECIFICATIONS.
2. WHEN DRIVEWAY IS BELOW BACK EDGE OF SIDEWALK PROFILE, STD. 43.4.1 MUST BE USED.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

DRIVEWAY DEVELOPMENT FOR  
3'-0" TRANSITION CURB

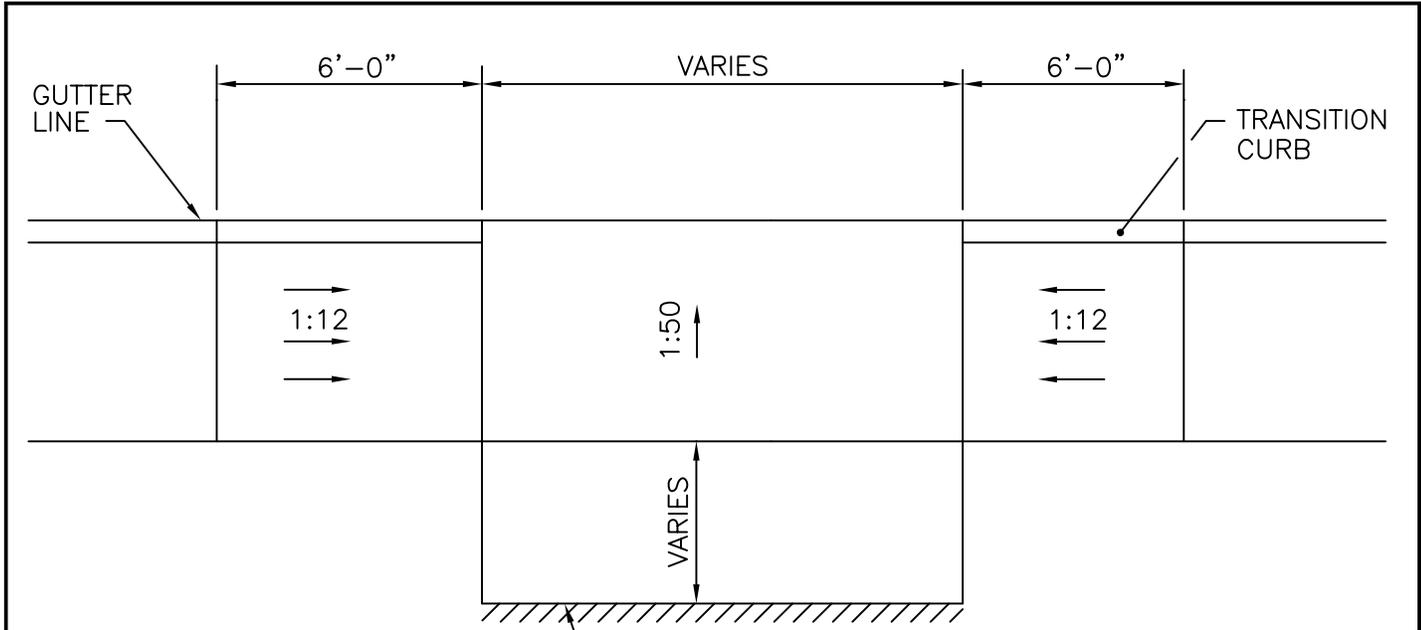
REVISIONS		
NO.	BY	DATE
1	MLP	March 05

*James A. Capaldi*  
CHIEF ENGINEER  
TRANSPORTATION

*Edmund J. Parkes Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

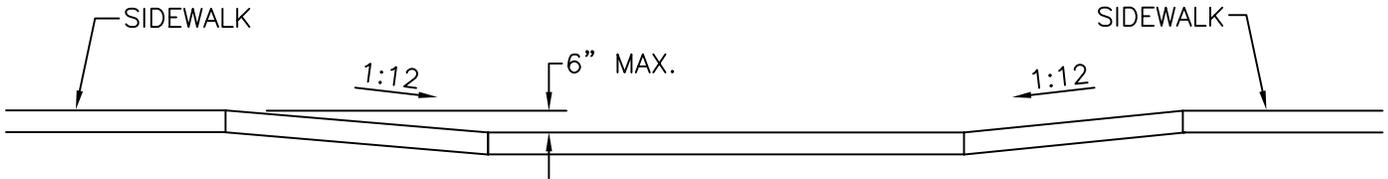
JUNE 15, 1998  
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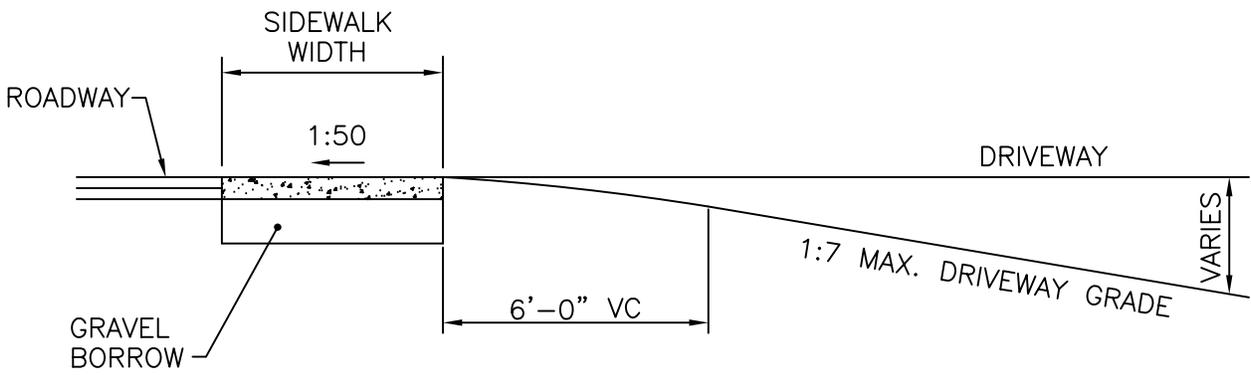


CUT AND MATCH EXISTING CONCRETE OR BITUMINOUS DRIVEWAY AS REQUIRED

PLAN



ELEVATION



SECTION

NOTE:  
SHALL BE IN ACCORDANCE WITH SECTION 905 OF THE R.I. STANDARD SPECIFICATIONS.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

DRIVEWAY DEVELOPMENT FOR  
6'-0" TRANSITION CURB

REVISIONS		
NO.	BY	DATE
1	MLP	3/1/2005

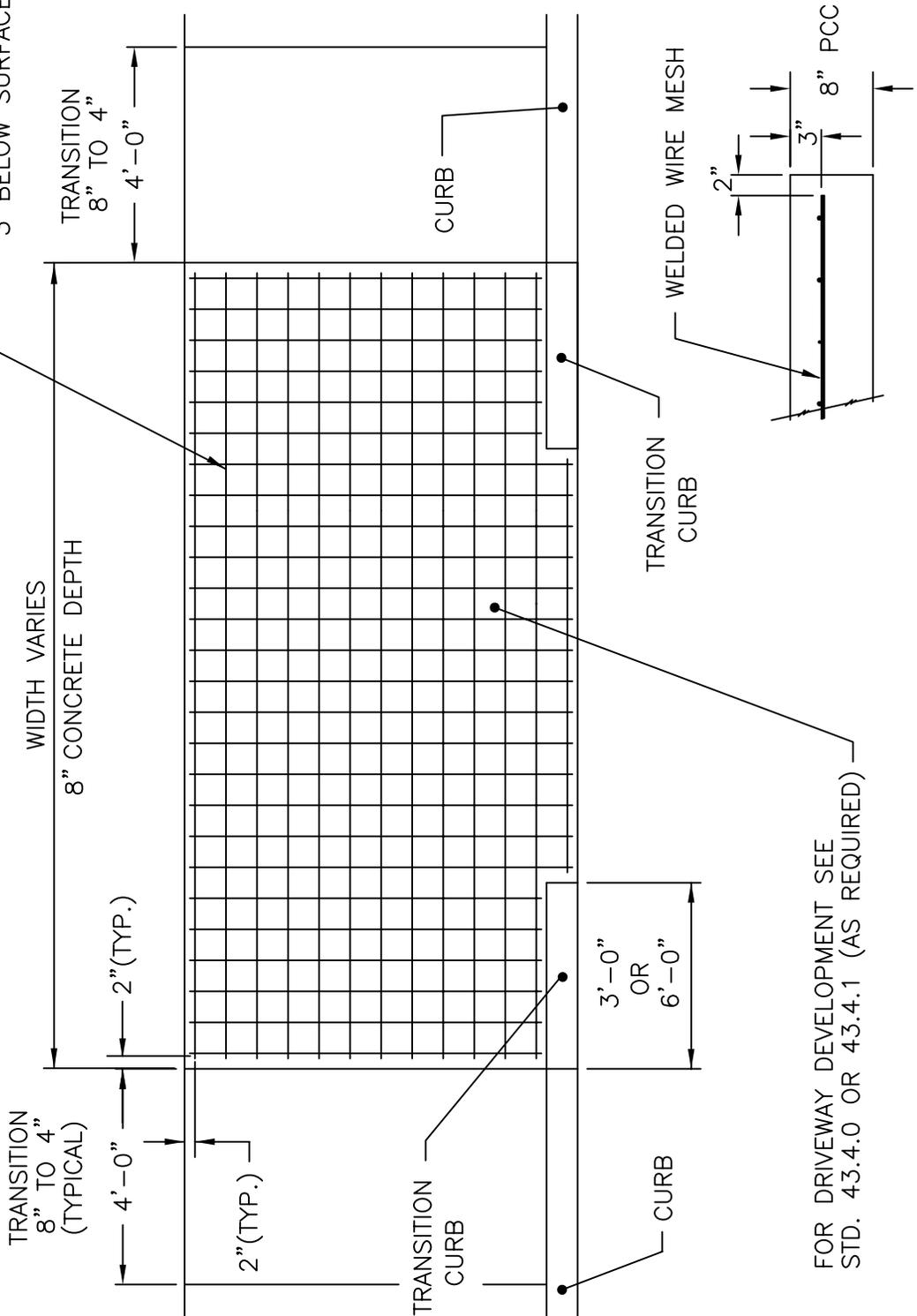
*Jean A. Capaldi*  
CHIEF ENGINEER  
TRANSPORTATION

*Edmund P. Parker Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

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6" x 6" - W4 x W4  
WELDED WIRE MESH  
3" BELOW SURFACE



**NOTE:**  
SHALL BE IN ACCORDANCE WITH SECTION 905 OF THE R.I. STANDARD SPECIFICATIONS.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

CEMENT CONCRETE DRIVEWAYS

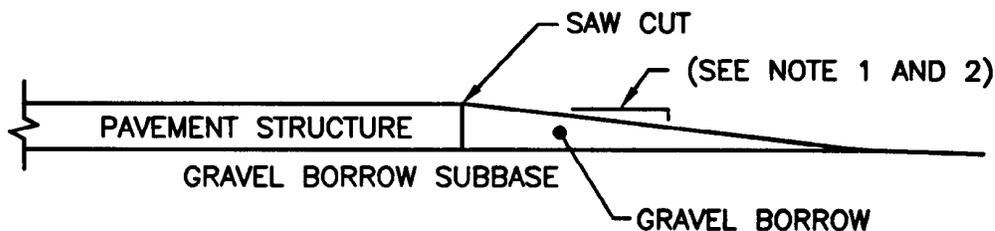
REVISIONS		
NO.	BY	DATE
1	MLP	1/10/05

*James A. Casabadi*  
CHIEF ENGINEER  
TRANSPORTATION

*Edmund Parker Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

JUNE 15, 1998  
ISSUE DATE





**NOTES:**

1. TRANSVERSE DROP-OFF:  
 POSTED SPEED  $\leq$  35 M.P.H.: 5 FEET HORIZONTALLY TO 1 INCH VERTICALLY  
 POSTED SPEED  $>$  35 M.P.H.: 10 FEET HORIZONTALLY TO 1 INCH VERTICALLY
2. LONGITUDINAL DROP-OFF (OUTSIDE EDGES OF PAVEMENT):  
 POSTED SPEED  $\leq$  35 M.P.H.: DROP-OFFS  $>$  3" BUT  $<$  5" SHALL BE TAPERED TO A 1:1 OR FLATTER SLOPE TO EXISTING GROUND.  
 ALL DROP-OFFS  $\geq$  5" SHALL BE TAPERED TO A 4:1 OR FLATTER SLOPE TO EXISTING GROUND.  
 POSTED SPEED  $>$  35 M.P.H.: LONGITUDINAL DROP-OFFS WILL NOT BE PERMITTED WITHIN 2'-0" OF A TRAVEL LANE. THIS AREA MUST BE AT GRADE WITH THE TRAVEL LANE. HOWEVER, SHOULD THE CONTRACTOR'S APPROVED SEQUENCE OF OPERATIONS RESULT IN OVERNIGHT DROP-OFFS GREATER THAN THREE INCHES OCCURRING BETWEEN 2'-0" TO 6'-0" FROM A TRAVEL LANE, THEN THE DROP-OFFS SHALL BE TAPERED TO A 4:1 OR FLATTER SLOPE TO EXISTING GROUND.

**RHODE ISLAND DEPARTMENT OF TRANSPORTATION**

REVISIONS		
NO.	BY	DATE

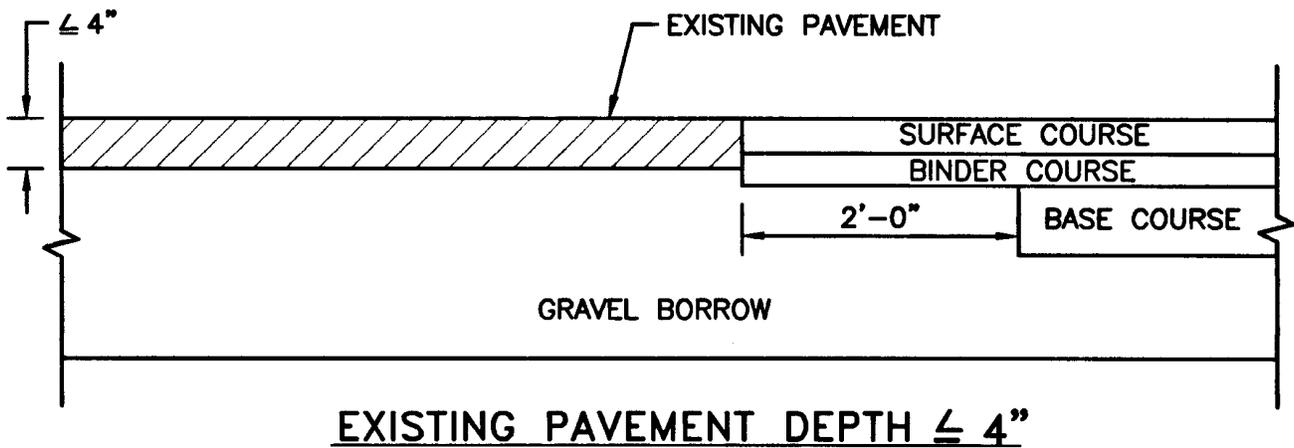
**PAVEMENT REMOVAL  
DROP-OFF DETAIL**

*James A. Capaldi*  
 CHIEF ENGINEER  
 TRANSPORTATION

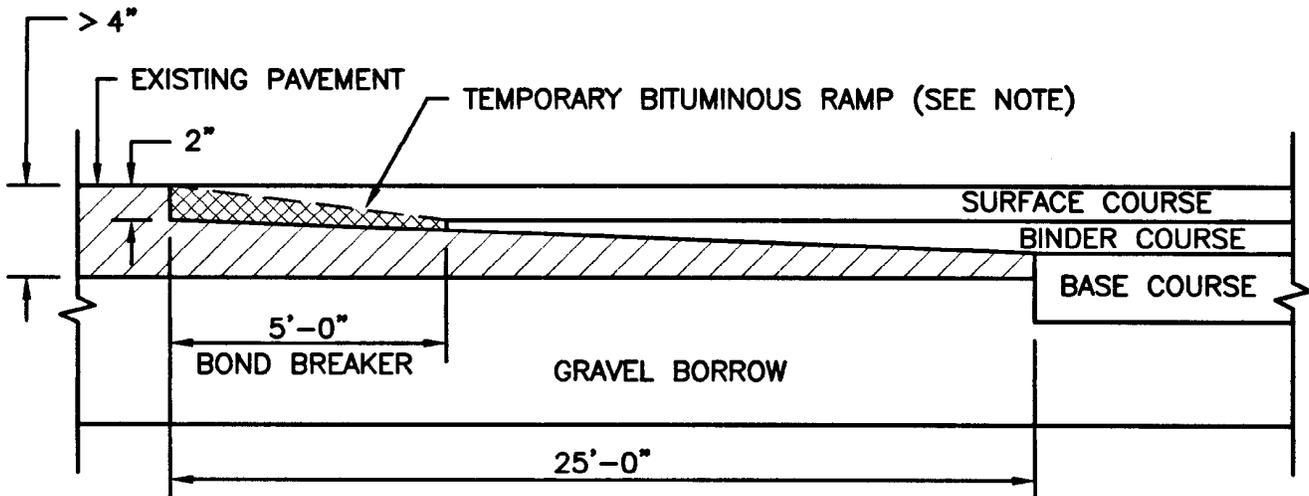
*Edmund J. Parker Jr.*  
 CHIEF DESIGN ENGINEER  
 TRANSPORTATION

JUNE 15, 1998  
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EXISTING PAVEMENT DEPTH  $\leq$  4"



EXISTING PAVEMENT DEPTH  $>$  4"

**NOTE:**

A BOND BREAKER (TAPERED OR EQUIVALENT) WILL BE PLACED 5'-0" FROM THE JOINT AND COVERED WITH THE BINDER COURSE AS THE TEMPORARY RAMP. PRIOR TO PLACING THE SURFACE COURSE, THE BINDER COURSE AND BOND BREAKER WILL BE REMOVED.

**RHODE ISLAND DEPARTMENT OF TRANSPORTATION**

REVISIONS		
NO.	BY	DATE

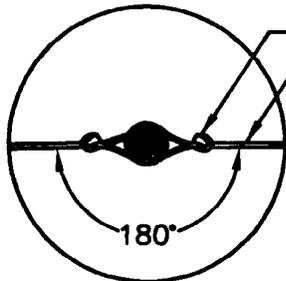
**TRANSVERSE PAVEMENT  
CUT AND MATCH**

*James H. Gualdi*  
CHIEF ENGINEER  
TRANSPORTATION

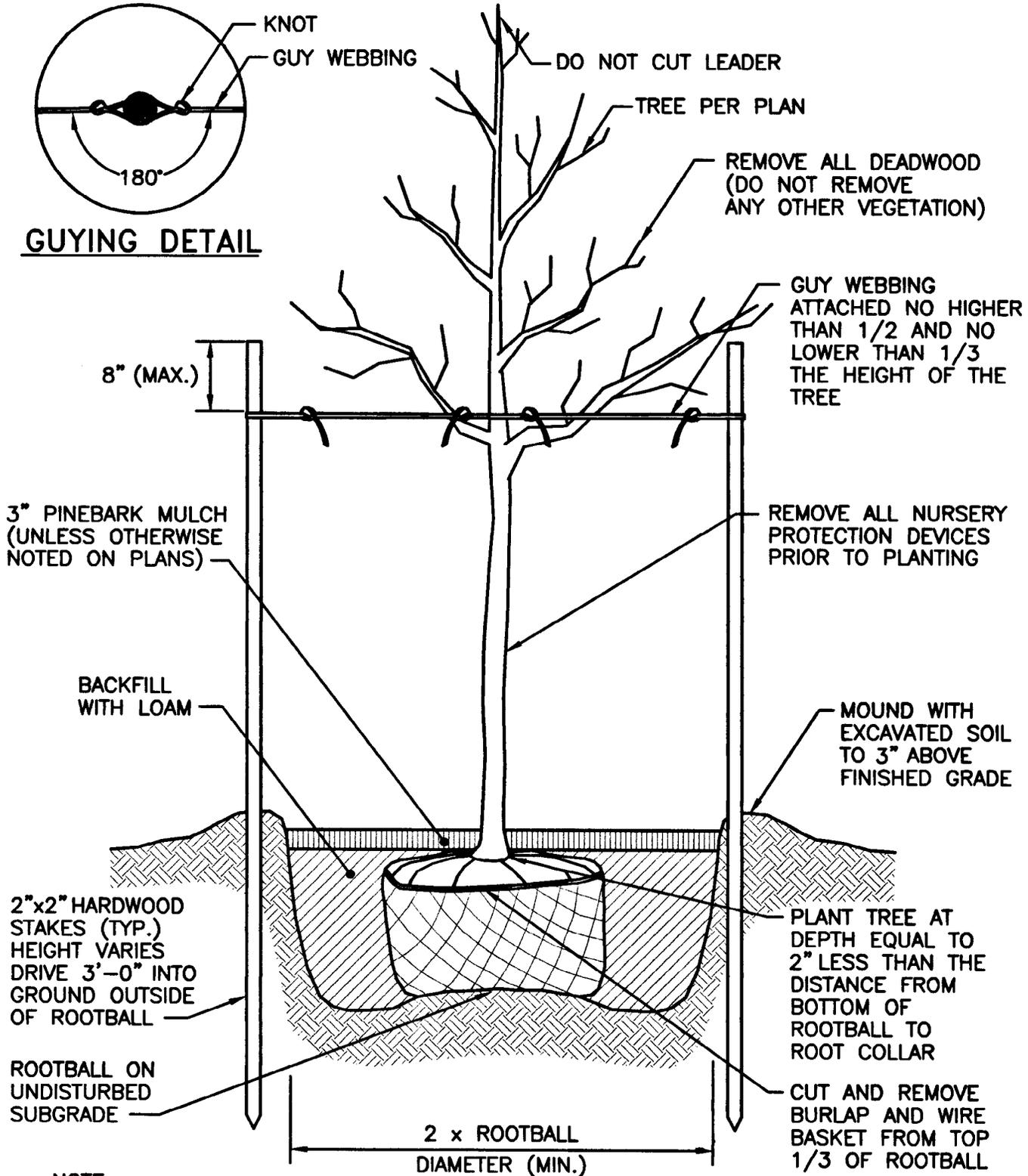
*Edmund J. Parker Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

**JUNE 15, 1998**  
ISSUE DATE





**GUYING DETAIL**



**NOTE:** SHALL BE IN ACCORDANCE WITH SECTION L.06 OF THE R.I. STANDARD SPECIFICATIONS.

**RHODE ISLAND DEPARTMENT OF TRANSPORTATION**

REVISIONS		
NO.	BY	DATE

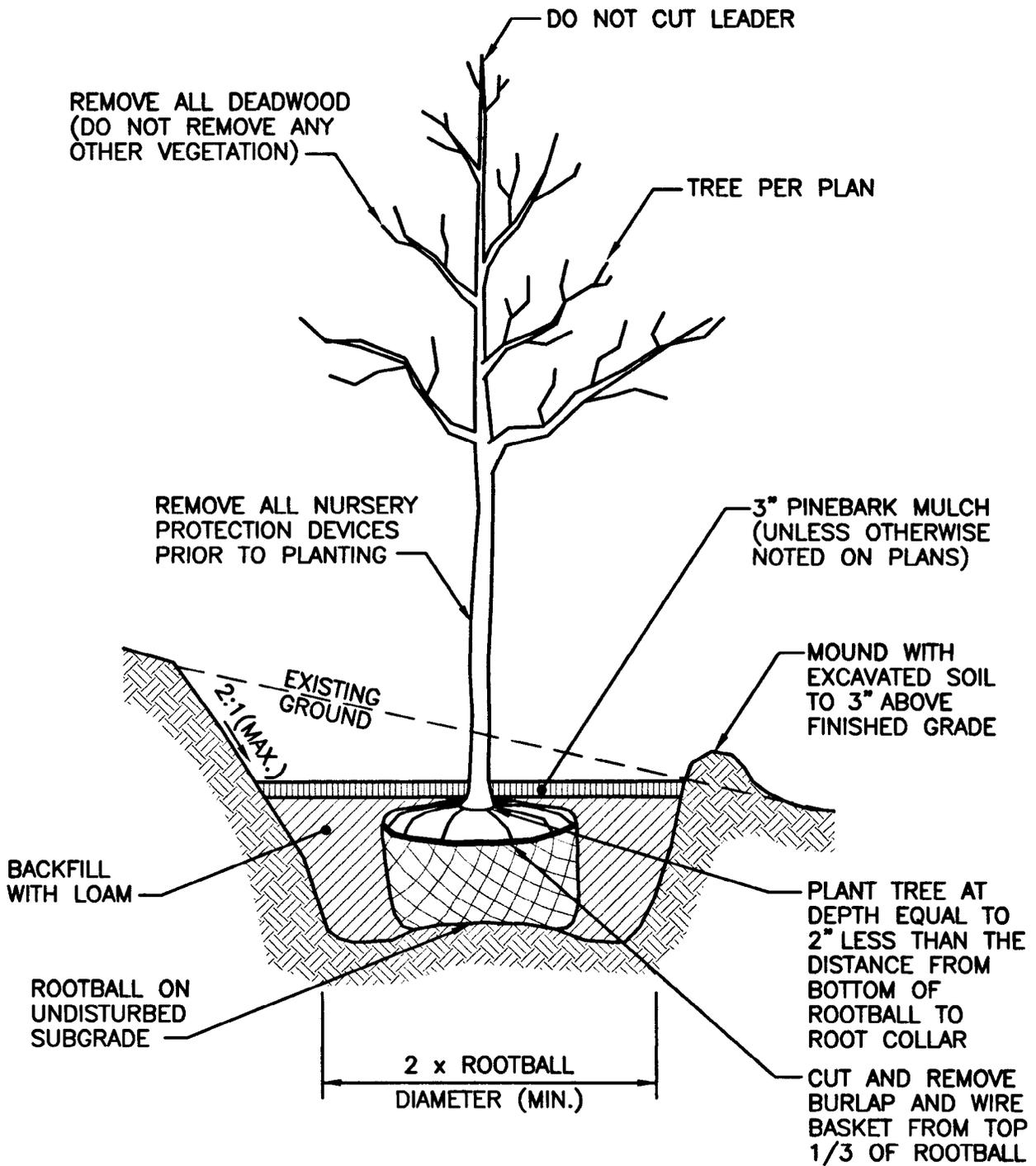
**LARGE TREE STAKING AND PLANTING DETAIL  
(2" CALIPER AND GREATER)**

*James A. Caselli*  
CHIEF ENGINEER  
TRANSPORTATION

*Edmund Parker Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

**JUNE 15, 1998**  
ISSUE DATE





- NOTES:**
1. SHALL BE IN ACCORDANCE WITH SECTION L.06 OF THE R.I. STANDARD SPECIFICATIONS.
  2. FOR STAKING DETAIL SEE STD. 50.1.0

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
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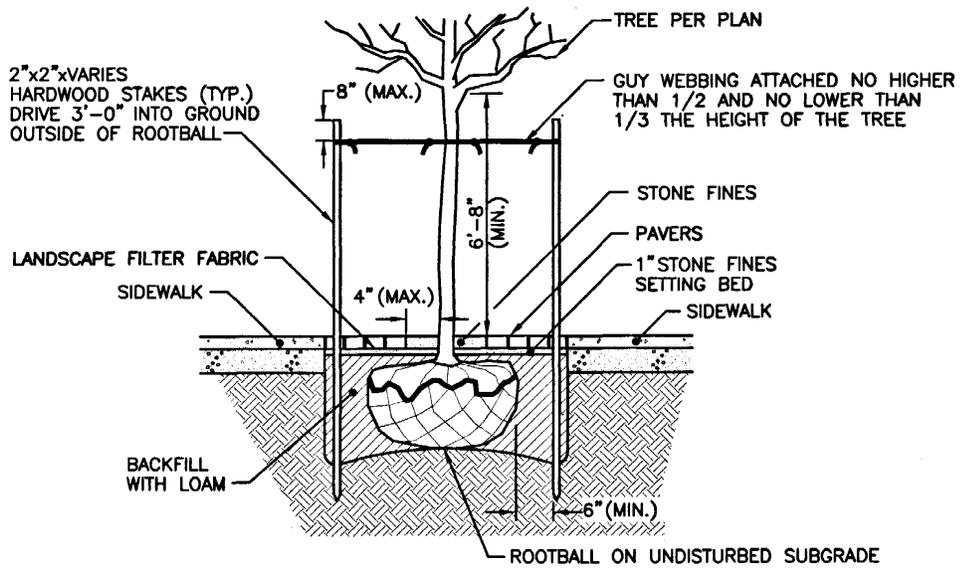
TREE PLANTING ON SLOPE

*James H. Casabelli*  
 CHIEF ENGINEER  
 TRANSPORTATION

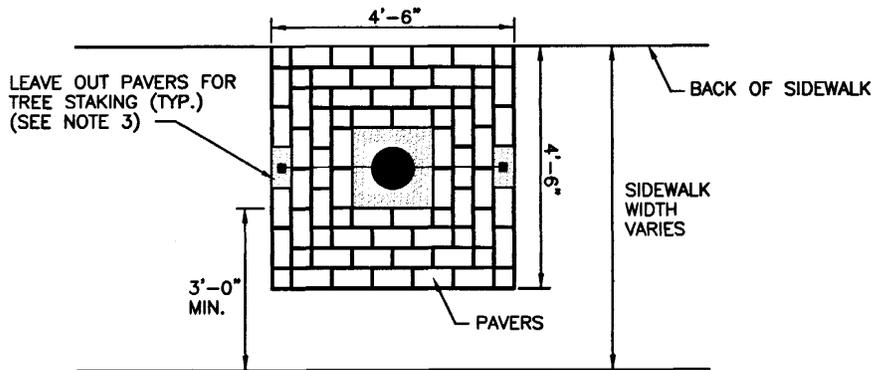
*Edmund P. Parker Jr.*  
 CHIEF DESIGN ENGINEER  
 TRANSPORTATION

JUNE 15, 1998  
 ISSUE DATE

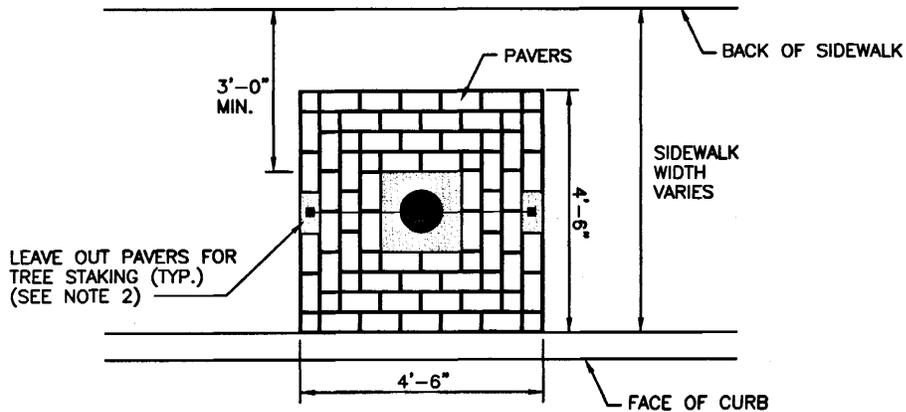




**SECTION**



**BACK OF SIDEWALK**



**BACK OF CURB**

**NOTES:**

1. SHALL BE IN ACCORDANCE WITH SECTIONS L.06 AND L.12 OF THE R.I. STANDARD SPECIFICATIONS.
2. STAKES SHOULD BE LOCATED PARALLEL TO ROAD AND SIDEWALK.
3. AFTER THE GUARANTEE PERIOD THE CONTRACTOR WILL BE RESPONSIBLE FOR REMOVAL OF STAKES AND GUY WEBBING, AND FOR THE INSTALLATION OF PAVERS PREVIOUSLY LEFT OUT FOR STAKING.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE

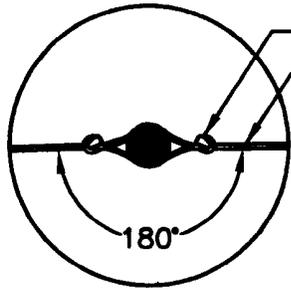
**PAVER DETAIL AROUND NEW TREES**

*James A. Capaldi*  
CHIEF ENGINEER  
TRANSPORTATION

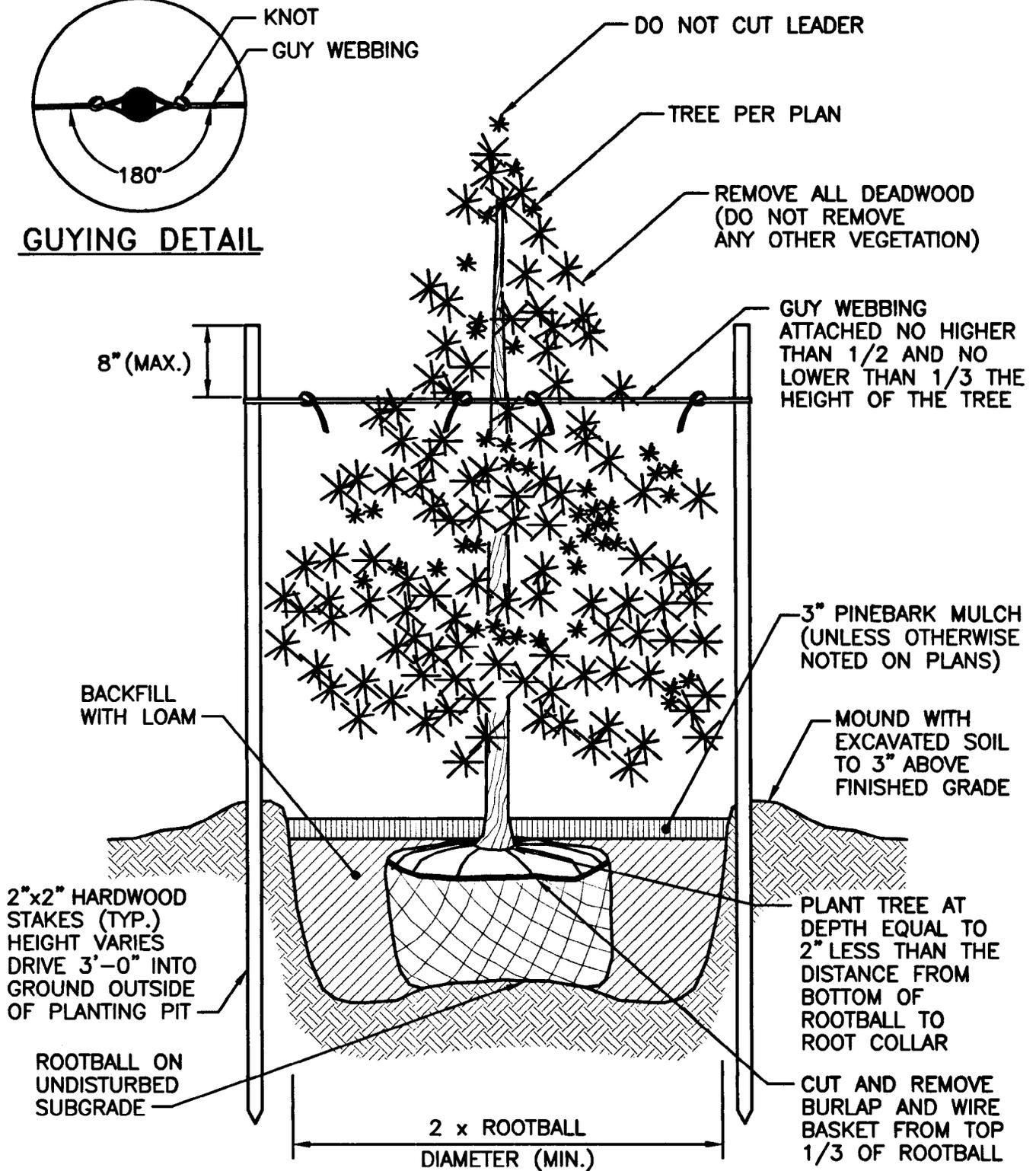
*Edward J. Pappalardo*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

JUNE 15, 1998  
ISSUE DATE





**GUYING DETAIL**



**NOTE:** SHALL BE IN ACCORDANCE WITH SECTION L.06 OF THE R.I. STANDARD SPECIFICATIONS.

**RHODE ISLAND DEPARTMENT OF TRANSPORTATION**

**EVERGREEN TREE PLANTING DETAIL  
(4'-0" HIGH AND GREATER)**

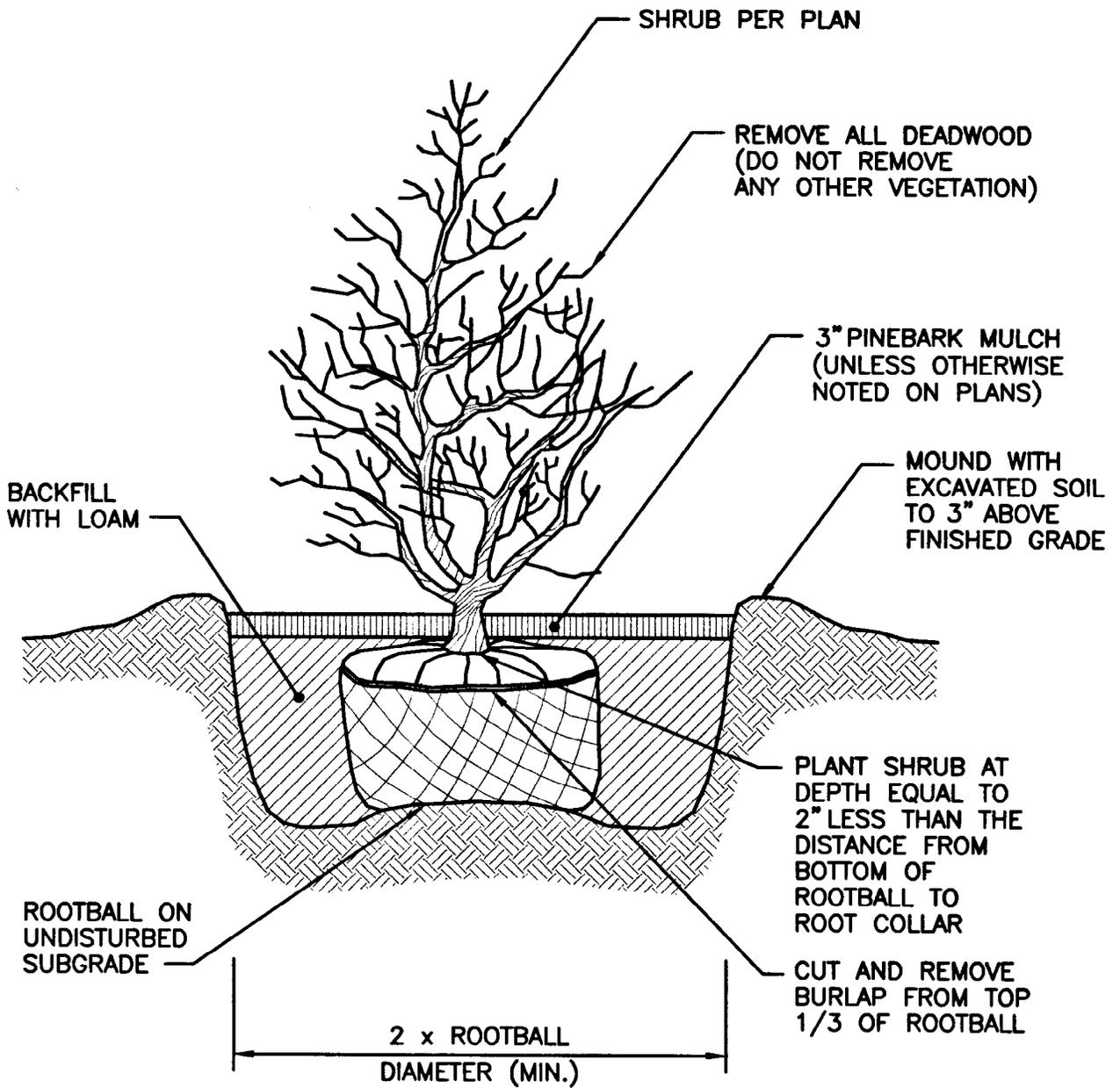
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*James A. Gualdi*  
CHIEF ENGINEER  
TRANSPORTATION

*Edmund Parker Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

JUNE 15, 1998  
ISSUE DATE





**NOTE:**  
SHALL BE IN ACCORDANCE WITH SECTION L.06 OF THE R.I. STANDARD SPECIFICATIONS.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

**BALL AND BURLAP  
SHRUB PLANTING DETAIL**

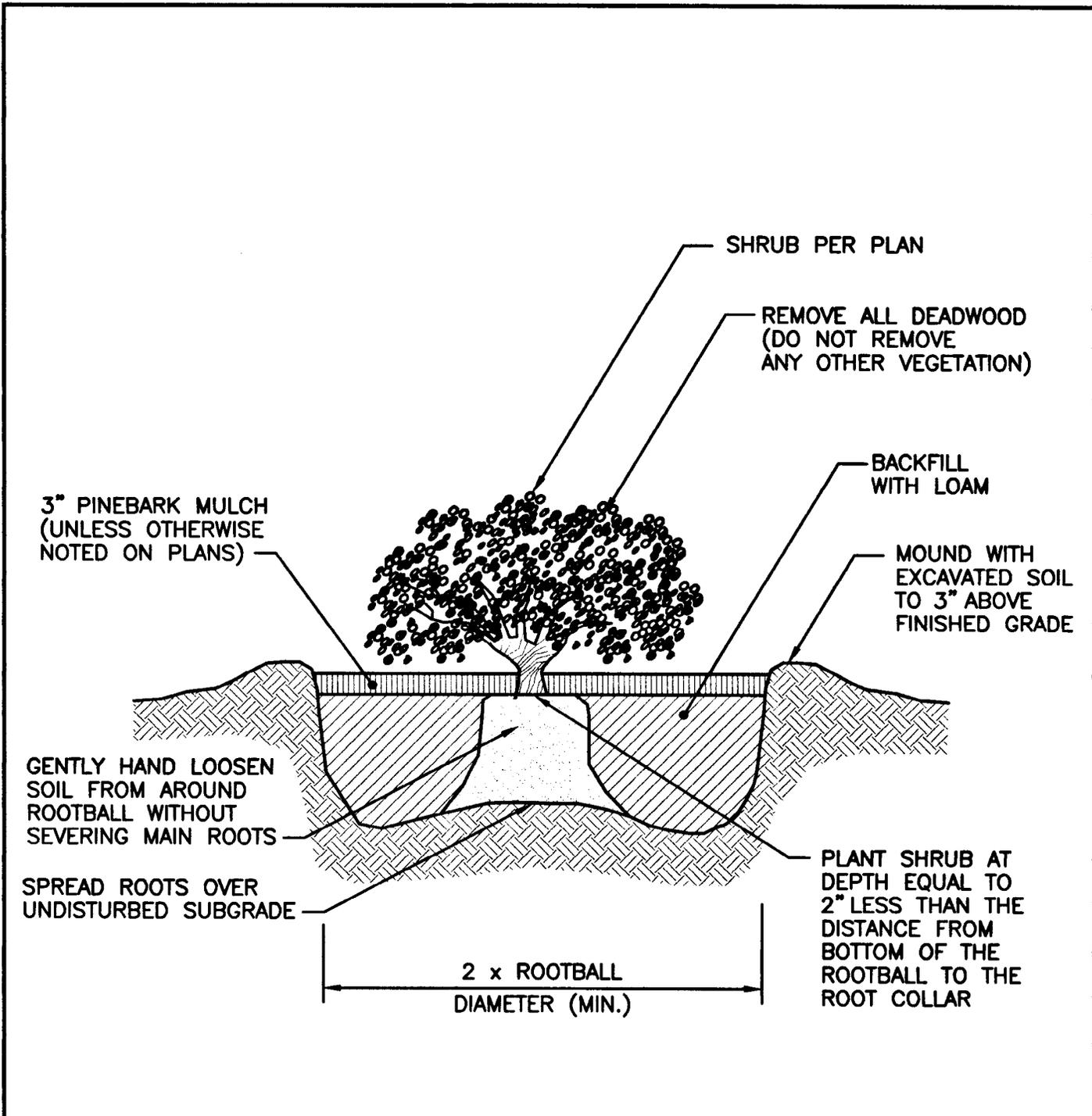
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*James A. Capaldi*  
CHIEF ENGINEER  
TRANSPORTATION

*Edmund Parker Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

JUNE 15, 1998  
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3" PINEBARK MULCH  
(UNLESS OTHERWISE  
NOTED ON PLANS)

SHRUB PER PLAN

REMOVE ALL DEADWOOD  
(DO NOT REMOVE  
ANY OTHER VEGETATION)

BACKFILL  
WITH LOAM

MOUND WITH  
EXCAVATED SOIL  
TO 3" ABOVE  
FINISHED GRADE

GENTLY HAND LOOSEN  
SOIL FROM AROUND  
ROOTBALL WITHOUT  
SEVERING MAIN ROOTS

SPREAD ROOTS OVER  
UNDISTURBED SUBGRADE

PLANT SHRUB AT  
DEPTH EQUAL TO  
2" LESS THAN THE  
DISTANCE FROM  
BOTTOM OF THE  
ROOTBALL TO THE  
ROOT COLLAR

2 x ROOTBALL  
DIAMETER (MIN.)

**NOTE:**  
SHALL BE IN ACCORDANCE WITH SECTION L.06 OF THE R.I. STANDARD SPECIFICATIONS.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

CONTAINER GROWN  
SHRUB PLANTING DETAIL

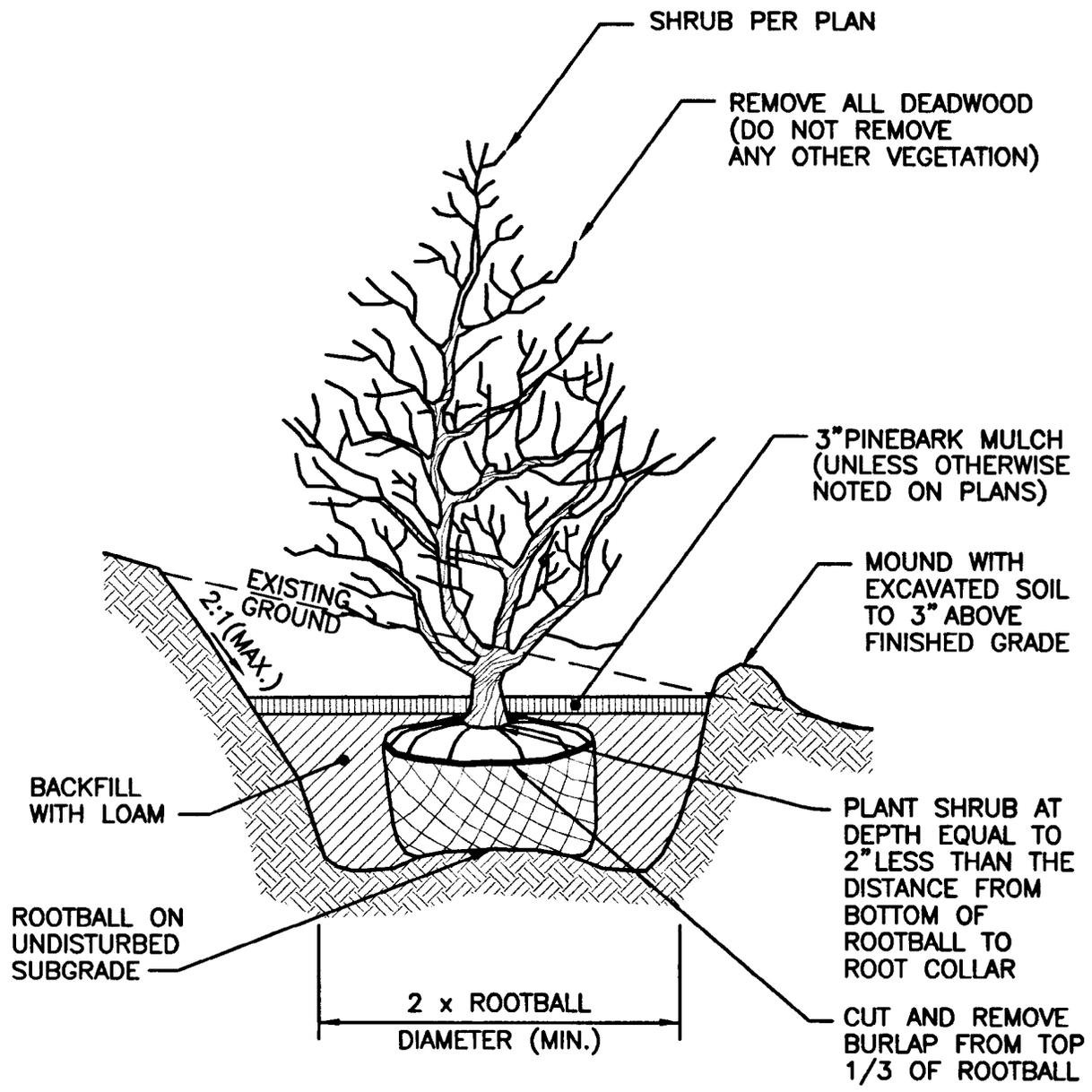
REVISIONS		
NO.	BY	DATE

*James A. Gualdi*  
CHIEF ENGINEER  
TRANSPORTATION

*Edmund J. Parker Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

JUNE 15, 1998  
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**NOTE:**  
SHALL BE IN ACCORDANCE WITH SECTION L.06 OF THE R.I. STANDARD SPECIFICATIONS.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

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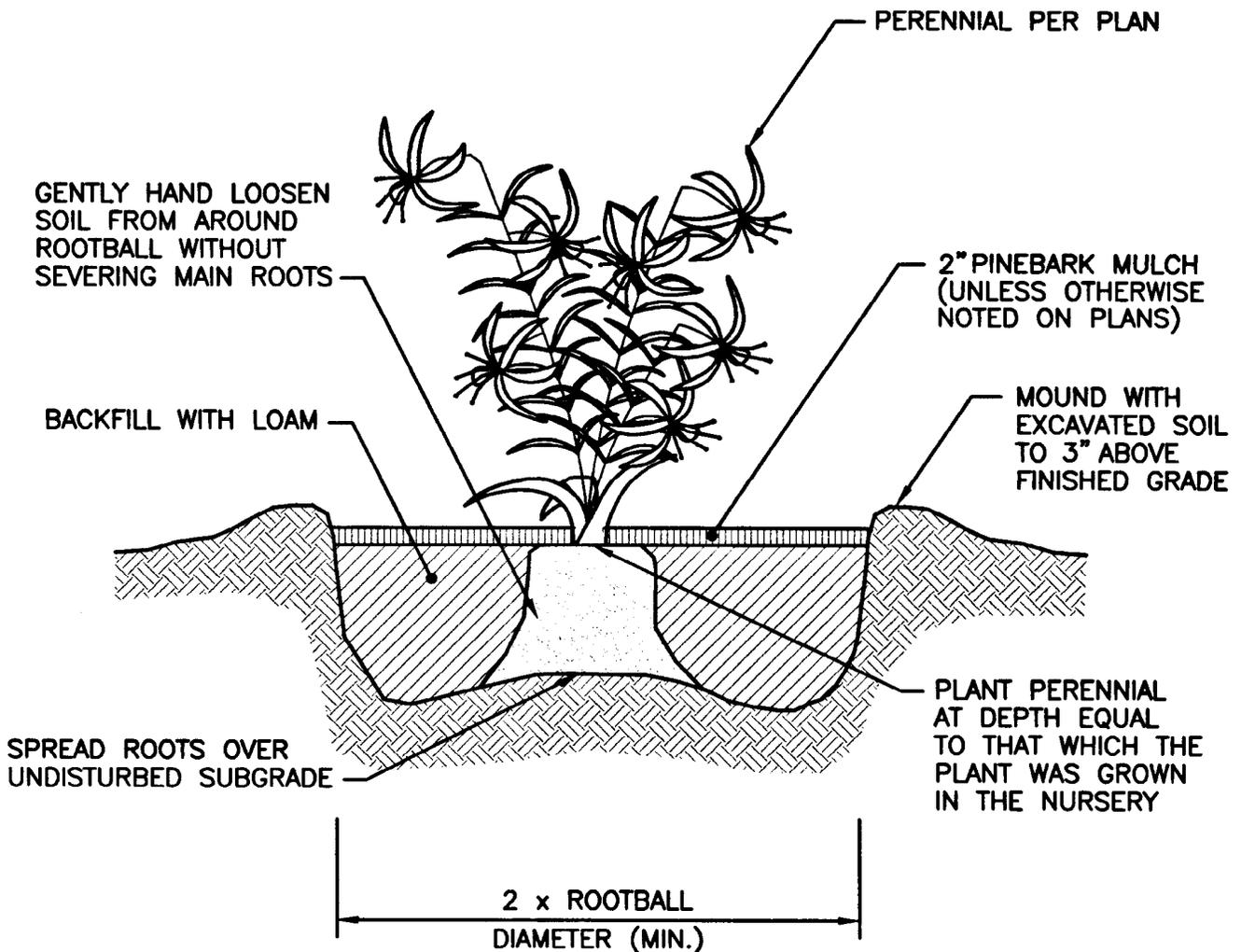
SHRUB PLANTING ON SLOPE

*James A. Capaldi*  
CHIEF ENGINEER  
TRANSPORTATION

*Edmund J. Parker Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

JUNE 15, 1998  
ISSUE DATE





**NOTE:**  
 SHALL BE IN ACCORDANCE WITH SECTION L.06 OF THE R.I. STANDARD SPECIFICATIONS.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

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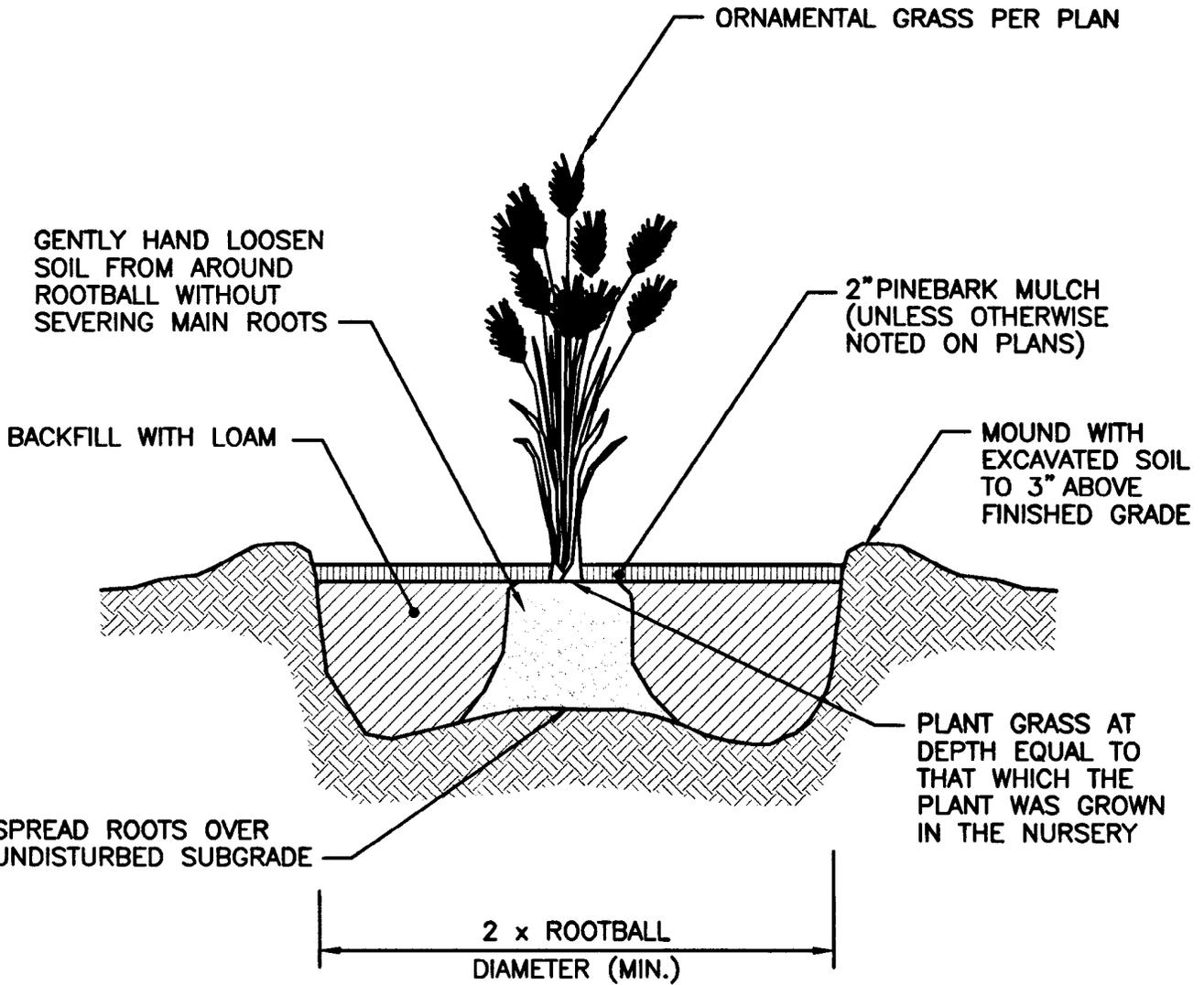
PERENNIAL PLANTING DETAIL

*James A. Casabelli*  
 CHIEF ENGINEER  
 TRANSPORTATION

*Edmund J. Parker Jr.*  
 CHIEF DESIGN ENGINEER  
 TRANSPORTATION

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**NOTE:**  
 SHALL BE IN ACCORDANCE WITH SECTION L.06 OF THE R.I. STANDARD SPECIFICATIONS.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

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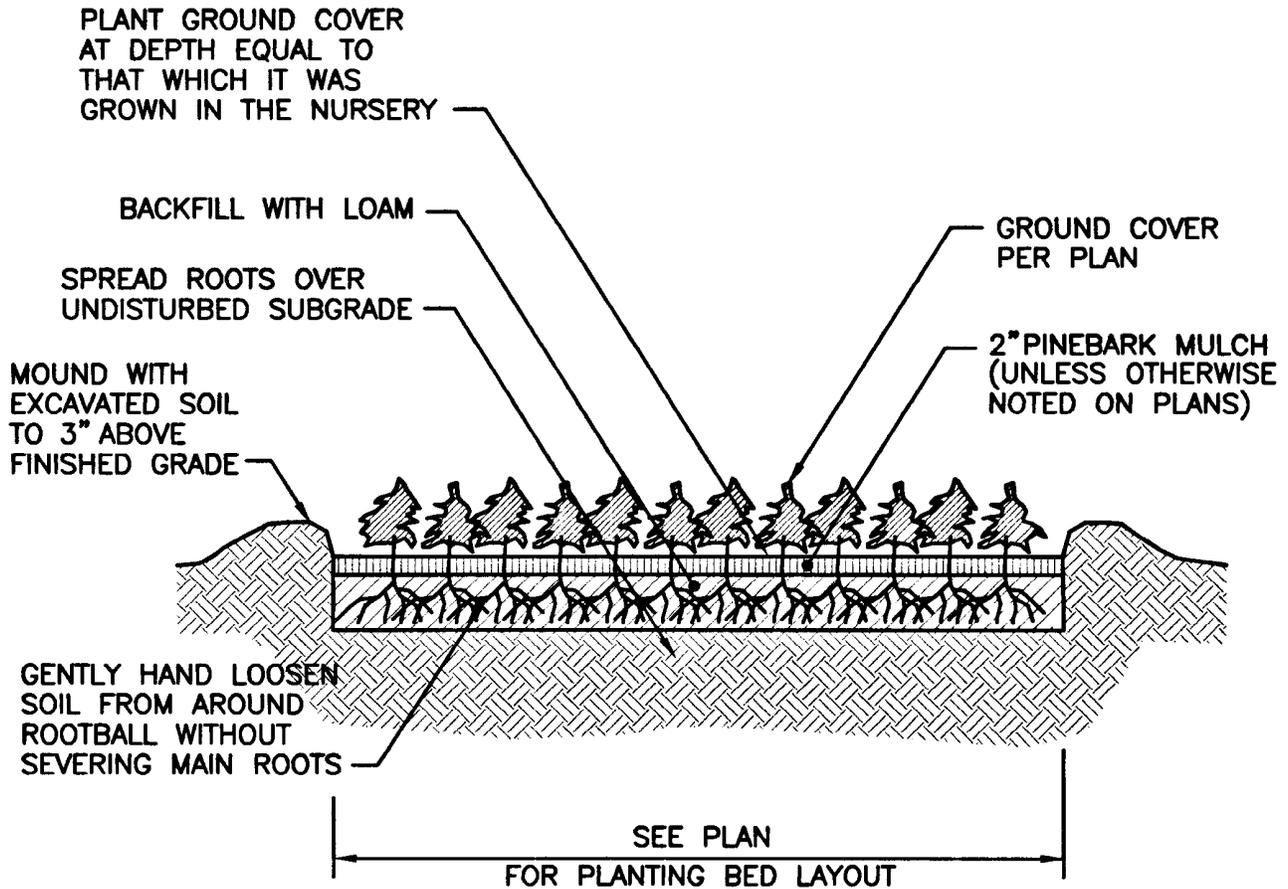
ORNAMENTAL GRASS PLANTING DETAIL

*James A. Casabelli*  
 CHIEF ENGINEER  
 TRANSPORTATION

*Edmund J. Parker Jr.*  
 CHIEF DESIGN ENGINEER  
 TRANSPORTATION

JUNE 15, 1998  
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**NOTE:**  
SHALL BE IN ACCORDANCE WITH SECTION L.06 OF THE R.I. STANDARD SPECIFICATIONS.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE

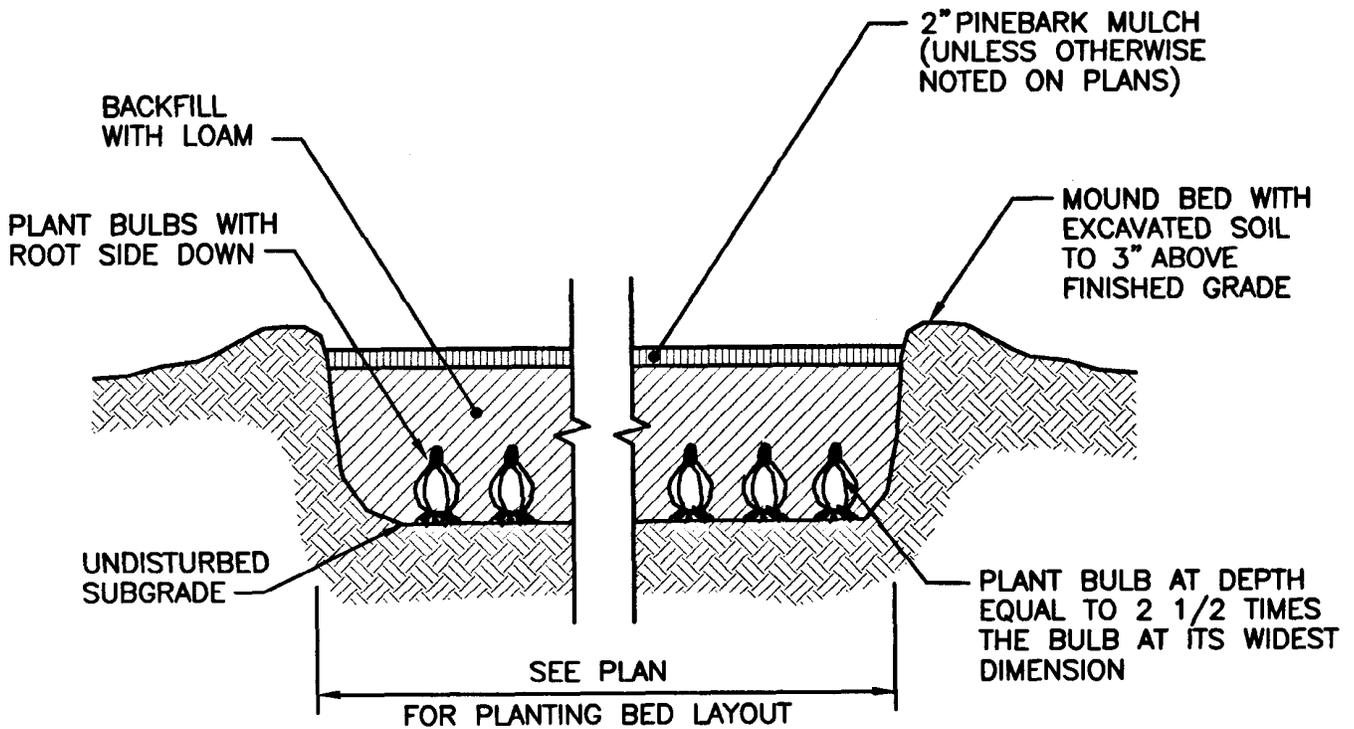
GROUND COVER PLANTING DETAIL

*James H. Casabini*  
CHIEF ENGINEER  
TRANSPORTATION

*Edmund Parker Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

JUNE 15, 1998  
ISSUE DATE





**NOTES:**

1. SHALL BE IN ACCORDANCE WITH SECTION L.06 OF THE R.I. STANDARD SPECIFICATIONS.
2. BY HAND, SPREAD BONE MEAL OVER ENTIRE PLANTING BED AT A RATE NOT TO EXCEED 1/2 LB. PER 25 SQ. FT.

**RHODE ISLAND DEPARTMENT OF TRANSPORTATION**

**BULB PLANTING DETAIL**

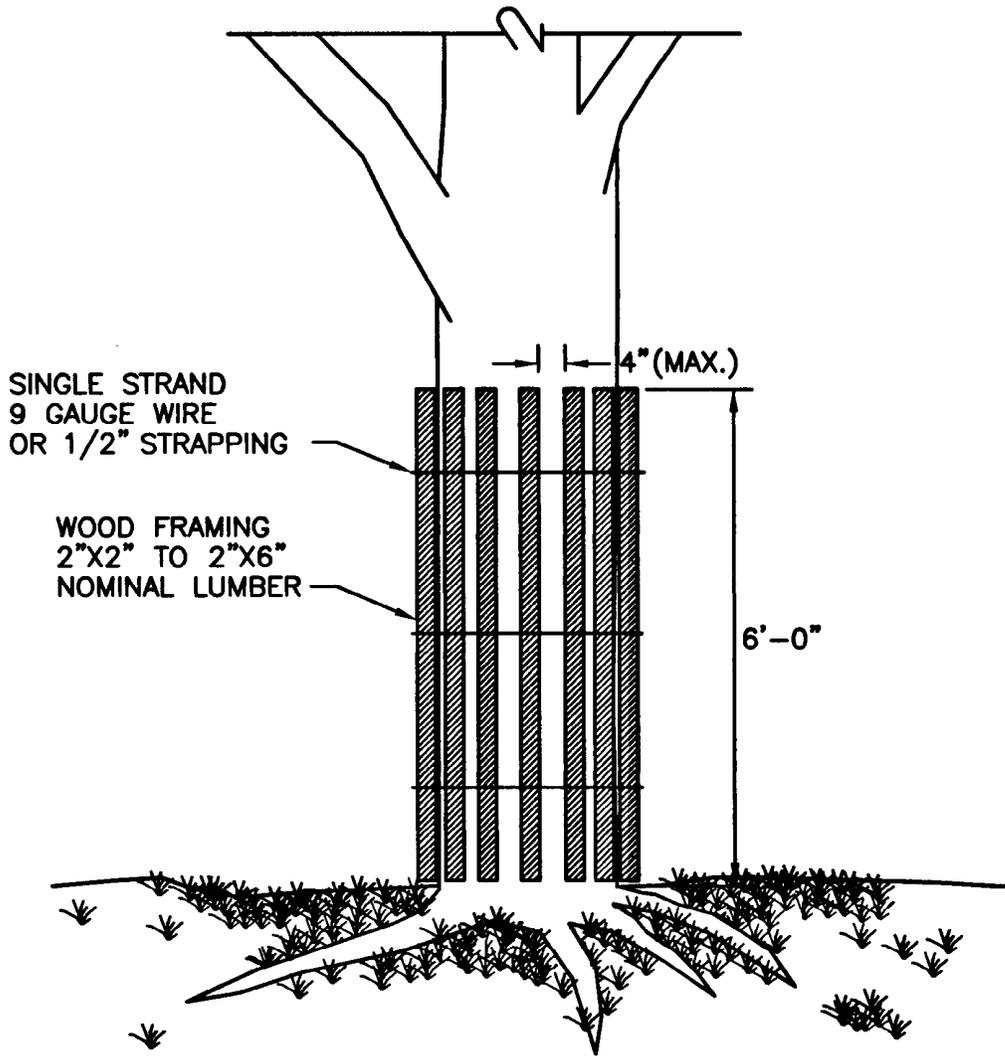
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*James A. Capaldi*  
 CHIEF ENGINEER  
 TRANSPORTATION

*Edmund P. Parker Jr.*  
 CHIEF DESIGN ENGINEER  
 TRANSPORTATION

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**NOTE:**  
SHALL BE IN ACCORDANCE WITH SECTION L.11 OF THE STANDARD SPECIFICATIONS.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

TREE PROTECTION DEVICE

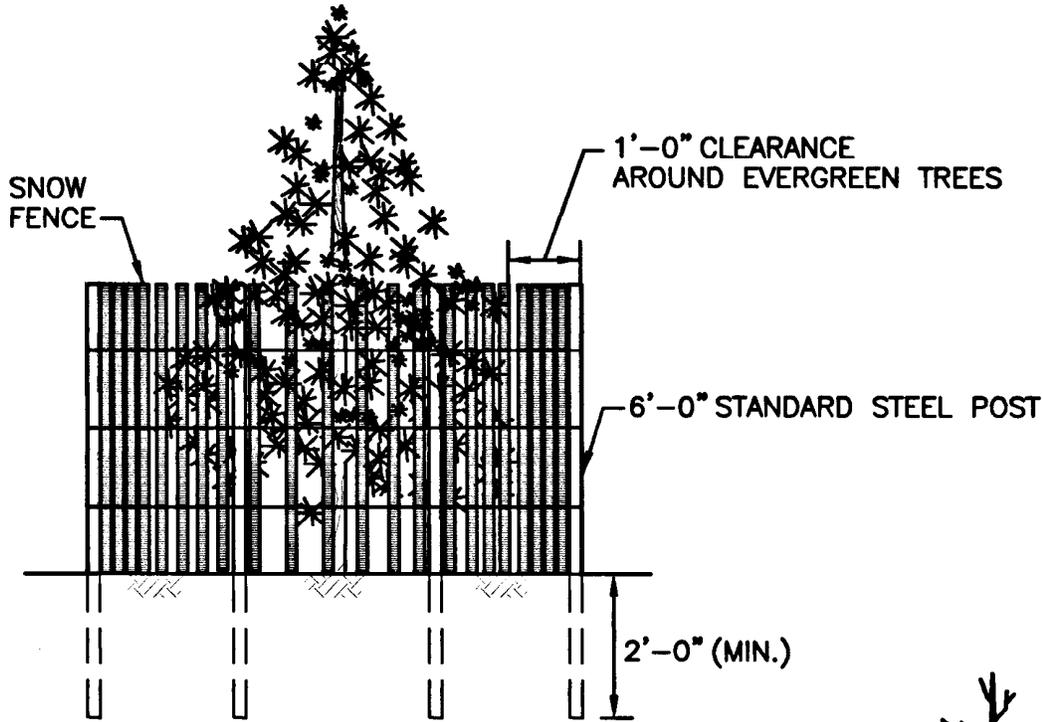
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*James H. Casaldi*  
CHIEF ENGINEER  
TRANSPORTATION

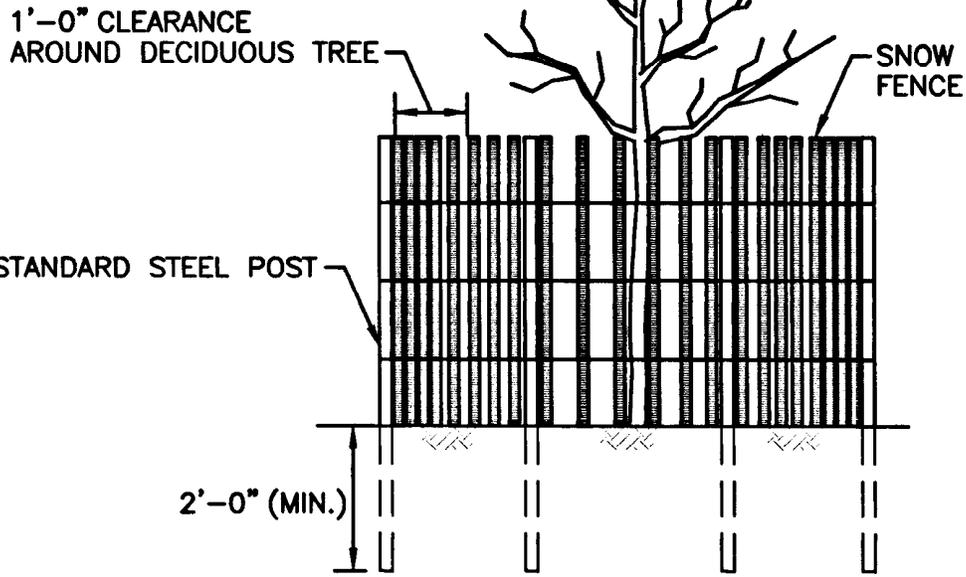
*Edmund Parker Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

JUNE 15, 1998  
ISSUE DATE





EVERGREEN TREE



DECIDUOUS TREE

**NOTE:**  
SHALL BE IN ACCORDANCE WITH SECTION L.11 OF THE R.I. STANDARD SPECIFICATIONS.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

DRIP LINE TREE PROTECTION DEVICE  
FOR EXISTING TREES

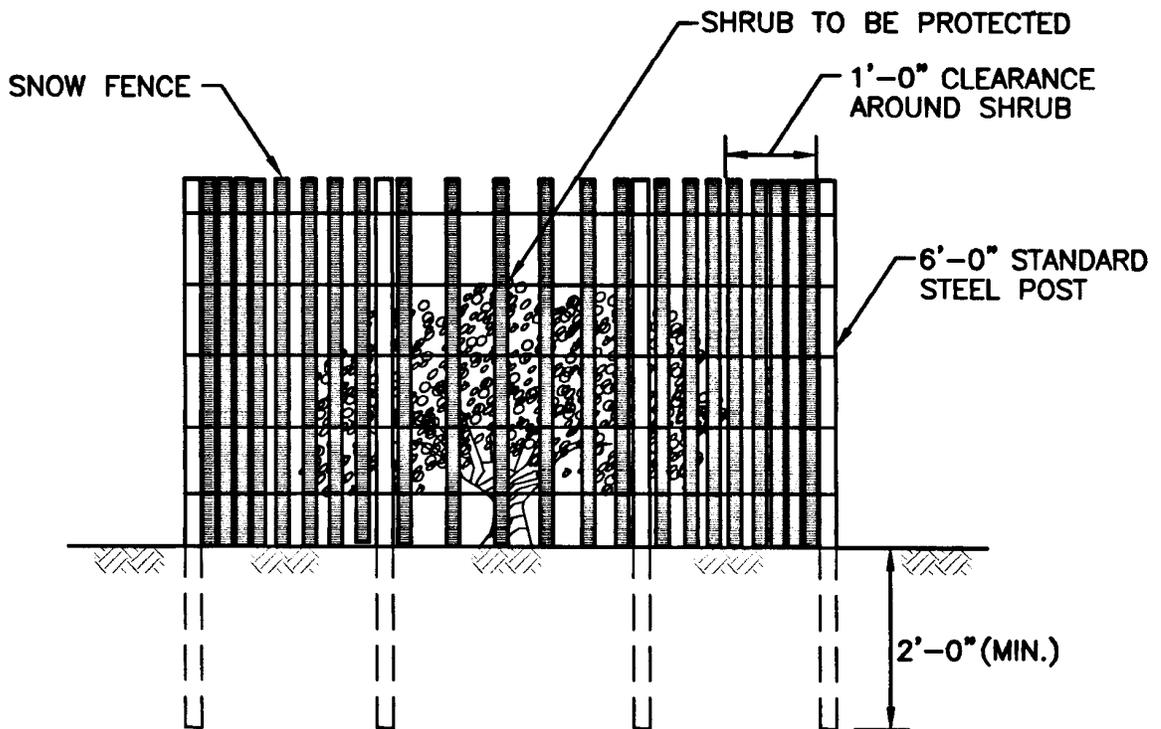
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*James A. Caselli*  
CHIEF ENGINEER  
TRANSPORTATION

*Edmund Parker Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

JUNE 15, 1998  
ISSUE DATE





**NOTE:**  
SHALL BE IN ACCORDANCE WITH SECTION L.11 OF THE R.I. STANDARD SPECIFICATIONS.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

SHRUB PROTECTION DEVICE

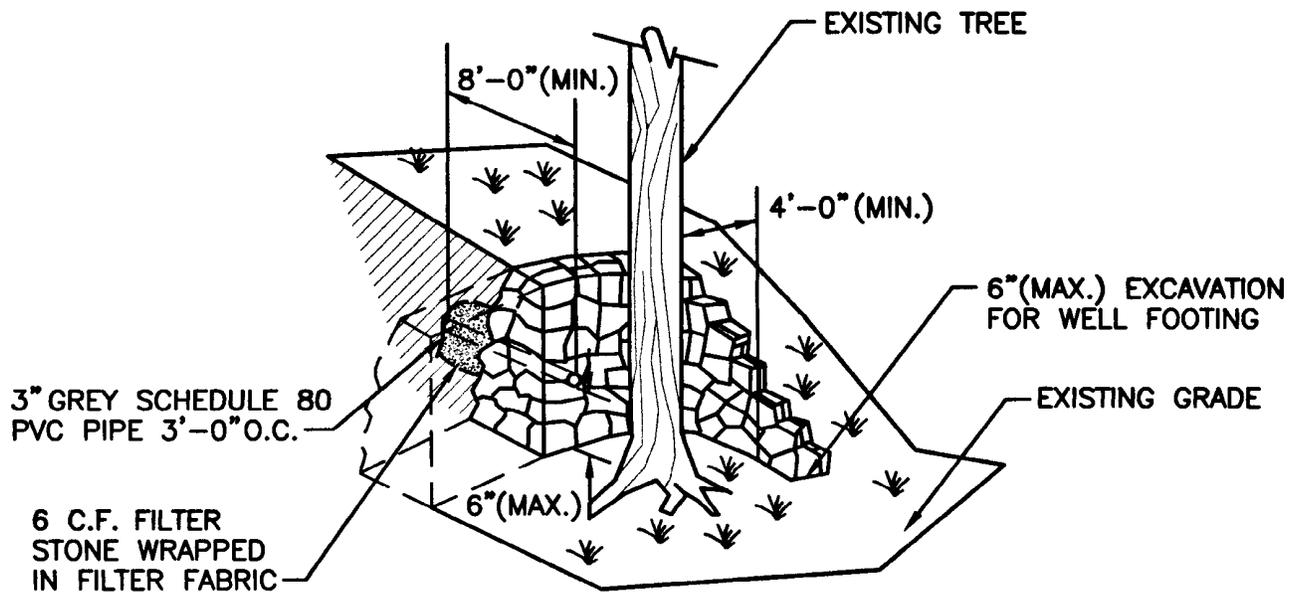
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*James H. Gualdi*  
CHIEF ENGINEER  
TRANSPORTATION

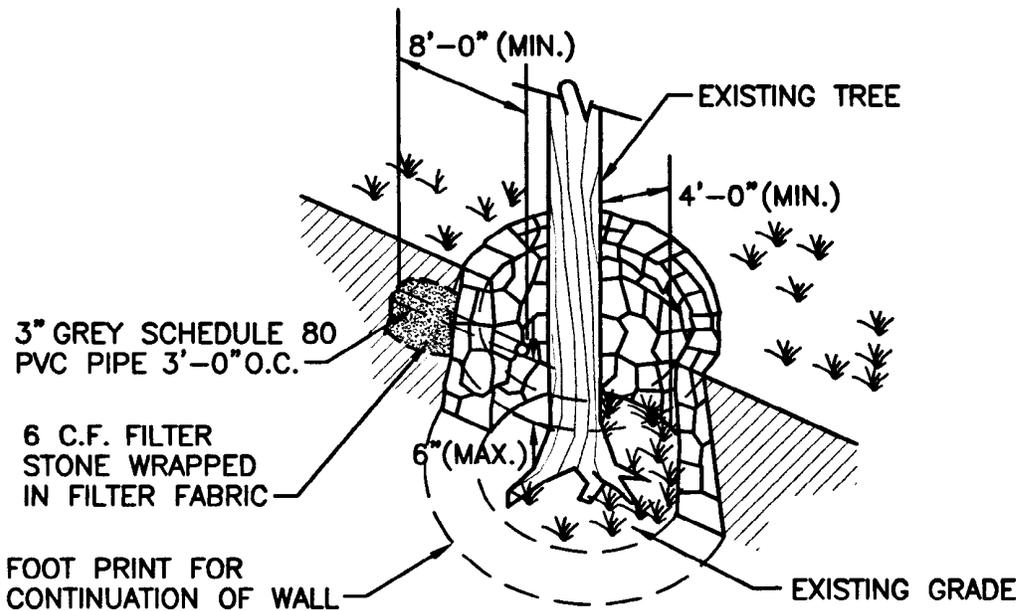
*Edmund J. Parker Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

JUNE 15, 1998  
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PARTIAL TREE WELL



CIRCUMFERENTIAL TREE WELL

**NOTE:**  
SHALL BE IN ACCORDANCE WITH SECTION L.13 OF THE R.I. STANDARD SPECIFICATIONS.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

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NO.	BY	DATE

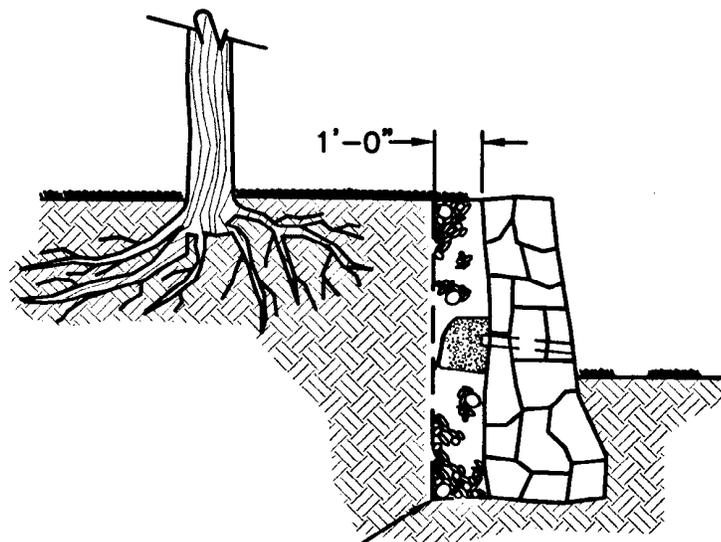
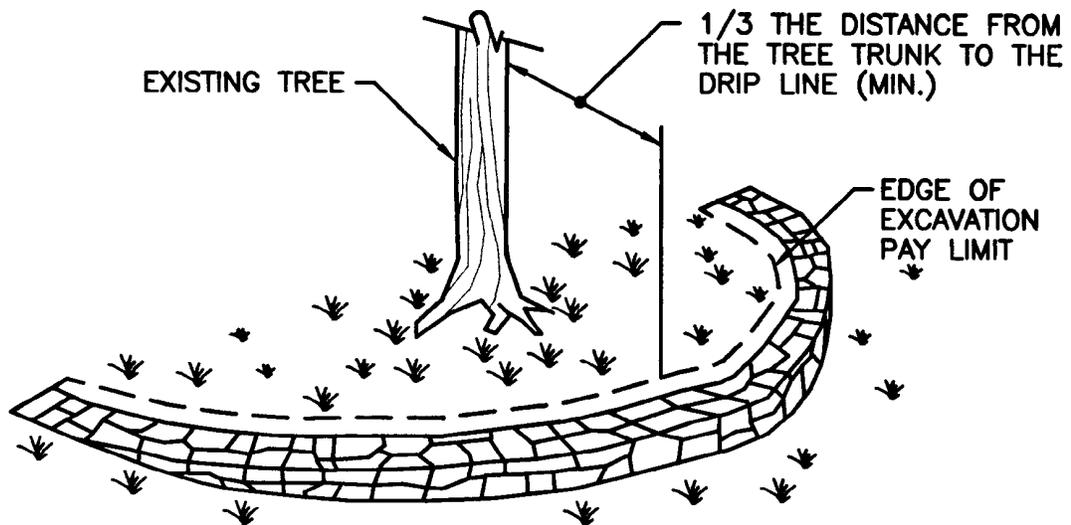
TREE WELL

*James H. Capaldi*  
CHIEF ENGINEER  
TRANSPORTATION

*Edmund Parker Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

JUNE 15, 1998  
ISSUE DATE





**SECTION**

**NOTES:**

1. SHALL BE IN ACCORDANCE WITH SECTION L.13 OF THE R.I. STANDARD SPECIFICATIONS.
2. FOR WALL INSTALLATION DETAILS REFERENCE STD. 10.0.1.
3. PRIOR TO EXCAVATION, THE CONTRACTOR SHALL ROOT PRUNE THE TREE. ALL ROOT PRUNING SHALL BE IN ACCORDANCE WITH SECTION L.10 OF THE R.I. STANDARD SPECIFICATIONS.

**RHODE ISLAND DEPARTMENT OF TRANSPORTATION**

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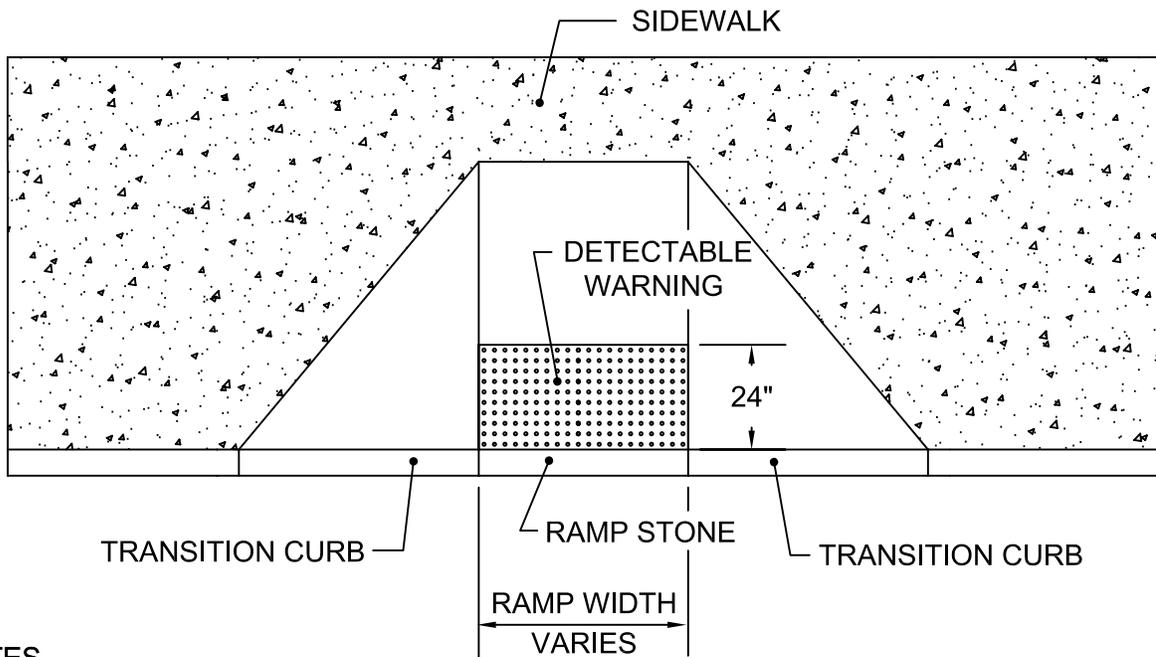
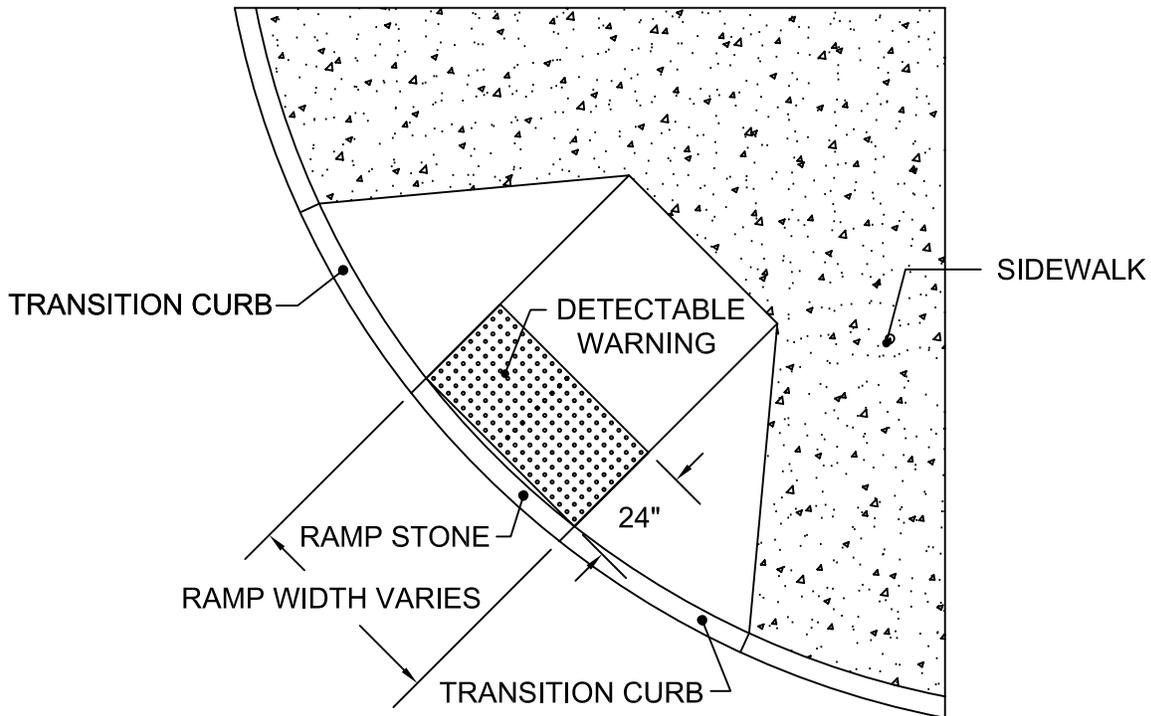
**TREE WALL**

*John A. Capaldi*  
 CHIEF ENGINEER  
 TRANSPORTATION

*Edward Parker Jr.*  
 CHIEF DESIGN ENGINEER  
 TRANSPORTATION

**JUNE 15, 1998**  
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**NOTES**

1. DETECTABLE WARNING SYSTEM SHALL BE IN ACCORDANCE WITH SECTION 942 OF THE RI STANDARD SPECIFICATIONS

**RHODE ISLAND DEPARTMENT OF TRANSPORTATION**

REVISIONS

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1	MLP	March 05

**DETECTABLE WARNING SYSTEM**

*James H. Casella*  
 CHIEF ENGINEER  
 TRANSPORTATION

*Edward J. Pappalardo*  
 CHIEF DESIGN ENGINEER  
 TRANSPORTATION

**JUNE 15, 1998**  
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